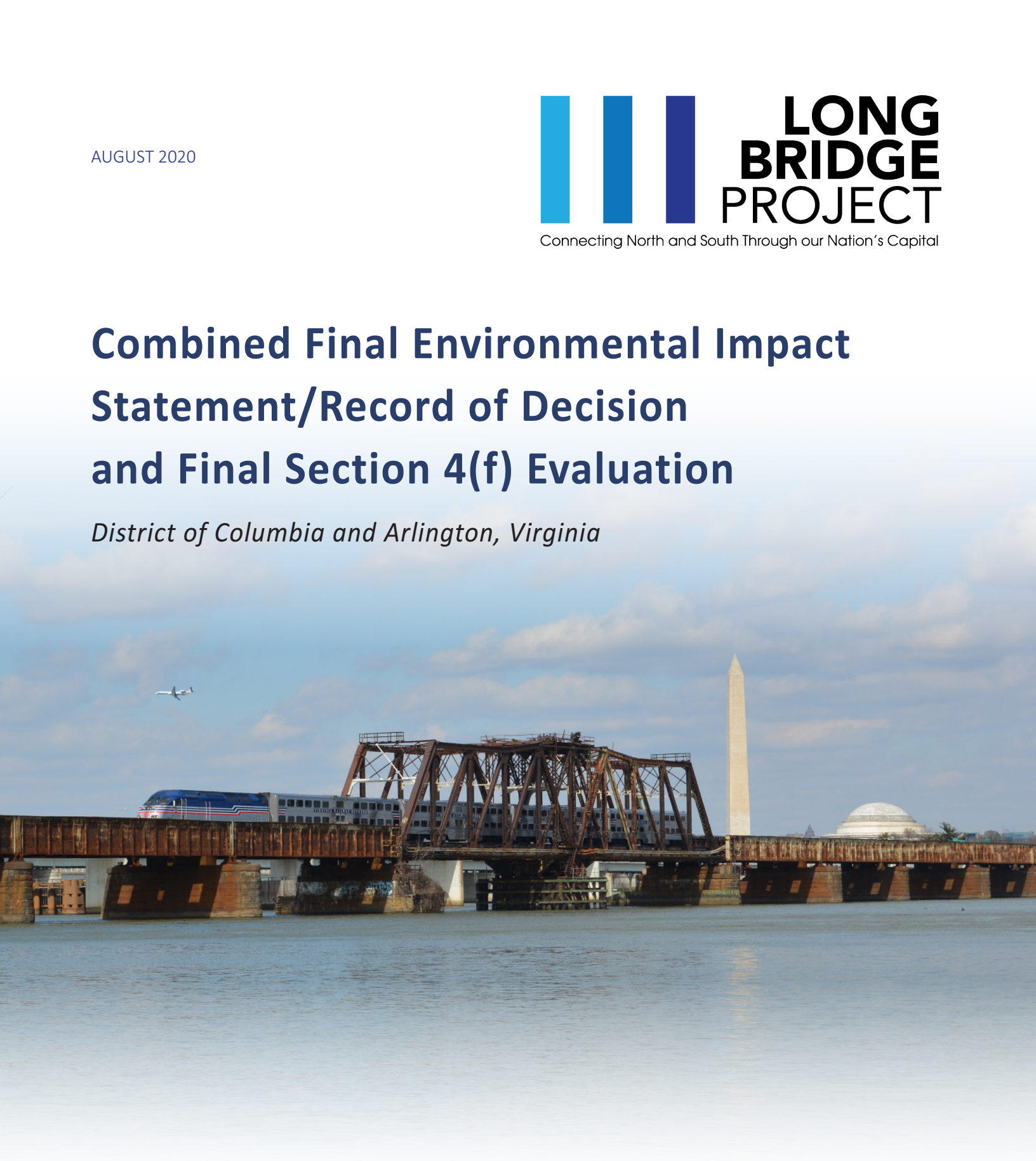
AUGUST 2020

LONG BRIDGE PROJECT

Connecting North and South Through our Nation's Capital

Combined Final Environmental Impact Statement/Record of Decision and Final Section 4(f) Evaluation

District of Columbia and Arlington, Virginia



U.S. Department of Transportation
Federal Railroad Administration

District Department of Transportation

DRPT
Virginia Department of Rail and Public Transportation

Long Bridge Project

Final Environmental Impact Statement and Final Section 4(f) Evaluation

Prepared By:
United States Department of Transportation – Federal Railroad Administration
District Department of Transportation
and
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With Cooperating Agencies:
National Park Service, Federal Transit Administration,
National Capital Planning Commission, United States Army Corps of Engineers – Baltimore District, United States Coast Guard, Virginia Railway Express

Submitted Pursuant To:
National Environmental Policy Act of 1969 (42 USC 4321) and the Council on Environmental Quality Implementing Regulations for NEPA (40 CFR 1500-1508); Federal Railroad Administration Procedures for Considering Environmental Impacts (64 FR 28545); Efficient Environmental Reviews for Project Decisionmaking (23 USC 139); Section 4(f) of the United States Department of Transportation Act of 1966 (49 USC 303); Section 106 of the National Historic Preservation Act of 1966 (54 USC 306108; 36 CFR 800); the Clean Air Act of 1970 (42 USC 7401); the Clean Water Act of 1972 (33 USC 1251); the Coastal Zone Management Act of 1972 (16 USC 1451); and the Endangered Species Act of 1973 (16 USC 1536(a); 50 CFR 17).

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The Federal Railroad Administration (FRA), jointly with the District Department of Transportation (DDOT) and the Virginia Department of Rail and Public Transportation (DRPT), and in cooperation with the National Park Service (NPS), have prepared a Combined Final Environmental Impact Statement (FEIS), Final Section 4(f) Evaluation, and Record of Decision (ROD) for the Long Bridge Project (the Project).

The purpose of the Project is to provide additional long-term railroad capacity and to improve the reliability of railroad service through the Long Bridge Corridor, a 1.8-mile railroad corridor between RO Interlocking in Arlington, Virginia, and L'Enfant Interlocking near 10th Street SW in the District of Columbia. Currently, there is insufficient capacity, resiliency, and redundancy to accommodate the projected demand in future railroad services. The Project is needed to address railroad service demands and to ensure the Long Bridge Corridor continues to serve as a critical link connecting the local, regional, and national transportation network. The Project connects logical termini, has independent utility, and does not restrict consideration of alternatives for other reasonably foreseeable transportation projects in the area.

Pursuant to 49 USC 24201 and 23 USC 139(n)(2), FRA is issuing a single document that consists of the FEIS and ROD. One of the primary purposes of this combined FEIS/ROD is to respond to substantive comments received during the public and agency review and comment period. Responses are in the form of factual corrections or clarifications and are presented as errata-style edits in tabular format. These errata document the changes made to the Draft EIS (DEIS) that are now reflected in the combined FEIS/ROD. The use of errata sheets and this combined FEIS/ROD comply with the requirements of 23 USC 139(n). The ROD states the decision, identifies the alternatives considered in reaching the decision, summarizes avoidance, minimization, and mitigation strategies and future design practices appropriate for this EIS, and states the next steps in the environmental review process that may occur with subsequent phases of the Project. Members of the public, project stakeholders, local governments, elected officials, non-governmental organizations, Native American Tribes, Federal, State, and local agencies have been and will continue to be involved in the Project throughout any subsequent phases of the Project.

This combined FEIS/ROD describes and summarizes the potential effects on the natural and human environment of the No Action and two Action Alternatives within the Project Study Area. FRA identified a Preferred Alternative based on analysis presented in the DEIS and input from the public, stakeholders, and agencies. Action Alternative A is the Preferred Alternative and most effectively achieves the Purpose and Need.

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1.0 Final EIS

1.1. Provisions for use of Errata Sheets and Combined Environmental Impact Statements/Records of Decision

Operating Administrations (OAs) within the United States Department of Transportation (USDOT) must develop, to the maximum extent practicable, a single document that combines the Final Environmental Impact Statement (FEIS) and Record of Decision (ROD), unless certain conditions exist.[1] USDOT may also prepare an FEIS by attaching errata sheets to the Draft EIS (DEIS) if certain conditions are met. The following sections describe the conditions for use of errata sheets and the combined FEIS/ROD.

1.1.1. Use of Errata Sheets

The use of errata sheets in lieu of rewriting the DEIS is appropriate when comments received on the DEIS are minor and the responses to those comments are limited to factual corrections or explanations of why the comments do not warrant further response. This approach is consistent with the Council on Environmental Quality (CEQ) regulations implementing the National Environmental Policy Act (NEPA) and existing statutory authorities.[2] When using this approach, the lead agency must make the errata sheets publicly available to the same extent as the DEIS and ensure continued availability of the DEIS.[3]

Comments on the Long Bridge Project DEIS require factual corrections and minor clarifications to the DEIS; however, no comments warrant further response in the form of modifications to alternatives, development and evaluation of additional alternatives, or modification of analyses.

The Long Bridge Project DEIS is currently available to the public on the project website (http://longbridgeproject.com/deis/). The DEIS errata sheets are included in this combined FEIS/ROD and are also available with the DEIS on the project website.[4]

1.1.2. Combined FEIS/ROD

Traditionally, and in accordance with the CEQ regulations, the lead agency issues FEIS and ROD documents separately with a minimum 30-day period between the FEIS and the ROD.[5] However, consistent with 23 USC 139(n), 49 USC 24201, and 49 USC 304a, to the maximum extent practicable, when a USDOT OA is a lead agency, it must combine the FEIS and ROD unless:

[1] 23 USC 139(n), 49 USC 24201, 49 USC 304a. The Federal Highway Administration, Federal Railroad Administration, and Federal Transit Administration have incorporated this provision into their NEPA implementing procedures at 23 CFR 771.124.
[2] 40 CFR 1503.4(c).
[3] U.S. Department of Transportation, *Guidance on the Use of Combined Final Environmental Impact Statements/Records of Decision and Errata Sheets in National Environmental Policy Act Reviews*, April 25, 2019. Accessed from https://www.transportation.gov/sites/dot.gov/files/docs/mission/transportation-policy/permittingcenter/337371/feis-rod-guidance-final-04302019.pdf. Accessed November 13, 2019.
[4] The DEIS is also available as part of the United States Environmental Protection Agency's Environmental Impact Statement Database, which contains electronic versions of all EISs received by EPA since October 2012. The database is available online at https://cdxnodengn.epa.gov/cdx-enepa-public/action/eis/search.
[5] 40 CFR 1506.10(b)(2)

- The FEIS makes substantial changes to the proposed action that are relevant to environmental or safety concerns; or
- There is a significant new circumstance or information relevant to environmental concerns that bears on the proposed action or the impacts of the proposed action.

The combined FEIS/ROD must meet applicable requirements for both an FEIS and ROD. The format of the FEIS/ROD can be flexible depending on the complexity of the action and other considerations such as accommodating the needs of Cooperating and Joint Lead Agencies.

The Long Bridge Project FEIS does not include substantial changes to the proposed action in terms of environmental or safety concerns, nor are there significant new circumstances or information relevant to environmental concerns of the proposed action or its impacts. Therefore, the Federal Railroad Administration (FRA) is using a combined FEIS/ROD for the Long Bridge Project (the Project).

This Combined FEIS/ROD includes:

- Identification of the preferred alternative and evaluation of all reasonable alternatives considered (**Section 1.2, Purpose and Need, Alternatives, and the Preferred Alternative**)
- Summary of public and agency coordination activities that have taken place since the issuance of the DEIS (**Section 1.3, Public Outreach Since Release of the DEIS**)
- Basis of the decision (**Section 2.3, Basis of Decision**)
- Summary of mitigation measures that would be incorporated in the Project (**Section 2.4, Measures to Minimize Harm**)
- Demonstration of compliance, to the extent possible, with all applicable environmental laws and executive orders, or provision of reasonable assurance that requirements can be met **(Section 2.7, Determinations and Findings Regarding Other Laws**)
- Section 4(f) determination and concurrence (**Section 2.7.2, Section 4(f)**)
- Discussion of substantive comments received on the DEIS and responses to comments (**Appendix D, Response to Agency and Organization Comments** and **Appendix E, Common Comment Categories with Responses**)

1.2. Purpose and Need, Alternatives, and the Preferred Alternative

This section discusses the Project's Purpose and Need (**Section 1.2.1, Purpose and Need**) and identifies Action Alternative A as the Preferred Alternative. It discusses the potential transportation and environmental effects of the Action Alternative A as compared to Action Alternative B and the No Action Alternative (**Section 1.2.2, Comparison of Transportation and Environmental Consequences**). This section demonstrates why Action Alternative A remains the Preferred Alternative following the formal DEIS comment period.

The U.S. Environmental Protection Agency (EPA) published the Notice of Availability (NOA) for the Long Bridge Project's DEIS in the *Federal Register* on September 13, 2019,[6] which began the formal 45-day public review and comment period. Distribution of the DEIS to local, regional, state, federal agencies, tribal governments, interested and affected parties, as well as the public provided opportunity for

[6] 84 FR 48352. Accessed from https://www.govinfo.gov/content/pkg/FR-2019-09-13/pdf/2019-19813.pdf. Accessed December 9, 2019.

review and comment. The review and comment period ended on October 28, 2019. DDOT and FRA held a public hearing on October 22, 2019, where verbal and written comments could be made regarding the DEIS.

No substantive comments were received on the DEIS that would result in changes to the Preferred Alternative. Additionally, no comments raised new circumstances or provided new information relevant to environmental or safety concerns that would warrant a change to the recommended Preferred Alternative.

1.2.1. Purpose and Need

As explained in **Chapter 2, Purpose and Need (Lines 82-273)** of the DEIS, the purpose of the Project is to provide additional long-term railroad capacity and to improve the reliability of railroad service through the Long Bridge Corridor. Currently, there is insufficient capacity, resiliency, and redundancy to accommodate the projected demand in future railroad services. The Project is needed to address these issues and to ensure the Long Bridge Corridor continues to serve as a critical link connecting the local, regional, and national transportation network.

1.2.2. Comparison of Transportation and Environmental Consequences

This section presents the potential impacts of each Action Alternative as compared to the No Action Alternative.

1.2.2.1. No Action Alternative

The No Action Alternative represents conditions that would exist in the planning year of 2040 if the Project is not implemented. While the No Action Alternative does not meet the Project's Purpose and Need, it serves as comparison against the potential impacts of the Preferred Alternative. The No Action Alternative includes the existing transportation network, plus all proposed transportation projects within the Study Area (0.25 miles of the existing Long Bridge Corridor) planned for completion by 2040. The No Action Alternative also includes the Potomac River Tunnel Project, as that project will run a new tunnel crossing underneath the existing Long Bridge. The projects included in the No Action Alternative all have independent utility from the Long Bridge Project. The proposed projects in the No Action Alternative are listed in **Chapter 3, Alternatives (Line 254)** of the DEIS.

1.2.2.2. Action Alternatives

Tables 1-1 and 1-2 summarize the analysis results and comparison of the No Action Alternative against Action Alternative A (the Preferred Alternative) and Action Alternative B. All the proposed transportation projects included in the No Action Alternative are assumed to be built and operational by 2025. The Action Alternatives and their effects on railroad transportation and the environment would differ substantially from the No Action Alternative.

Action Alternative A (the Preferred Alternative) would construct a new two-track railroad bridge over the Potomac River and the George Washington Memorial Parkway (GWMP) between the existing railroad bridge and the Metrorail Bridge. It would expand the Long Bridge Corridor from two to four tracks. In doing so, the Project would provide additional long-term railroad capacity and improve reliability of railroad service through the Long Bridge Corridor. The Project would address the current

insufficient capacity in the Corridor as well as provide resiliency and redundancy to accommodate projected demand in future railroad services. Differentiating impacts and benefits of the No Action Alternative and the Action Alternatives are described in the following section.

Similar to Action Alternative A (the Preferred Alternative), Action Alternative B would construct a new two-track railroad bridge over the Potomac River and the GWMP between the existing railroad bridge and the Metrorail Bridge. However, Action Alternative B would also replace the existing Long Bridge and the railroad bridge over the GWMP rather than keeping those bridges (note that the railroad bridge over the GWMP is a separate bridge from Long Bridge). In addition to replacing the bridge over the GWMP and Long Bridge, Action Alternative B would expand the Long Bridge Corridor from two to four tracks in the same manner as Action Alternative A (the Preferred Alternative).

To mitigate impacts to resources protected by Section 4(f) of the U.S. Department of Transportation Act of 1966 (Section 4(f)), the Virginia Department of Rail and Public Transportation (DRPT) would construct a bike-pedestrian crossing that connects Long Bridge Park, the GWMP/Mount Vernon Trail (MVT), and West Potomac Park. This connection would cross the Potomac River on an independent bridge on the upstream side of the new railroad bridge. The southern end of the bike-pedestrian crossing would connect to a path at the northern end of the Long Bridge Aquatic and Fitness Center and Park Expansion in Long Bridge Park. The bike-pedestrian path would cross over the GWMP, MVT, and the Potomac River on a 2,300-foot-long bridge consisting of prefabricated truss spans. The northern end of the bike-pedestrian path would connect to Ohio Drive SW in West Potomac Park. **Tables 1-1** and **1-2** include a summary of the additional impacts of the bike-pedestrian crossing. The analysis of temporary impacts in **Table 1-2** assumes that construction of the bike-pedestrian crossing would use the same construction access and staging areas as the railroad bridge construction.

The estimated construction duration for Action Alternative A is five (5) years, which assumes that construction activities at different locations may be occurring at the same time. The estimated construction duration for Action Alternative B is eight (8) years and three (3) months. It may be possible to phase construction of the bike-pedestrian bridge so that some of the bridge is constructed concurrently with the railroad bridge. However, this EIS analyzes the scenario that would result in a longer duration of impacts, which assumes an additional two (2) years of construction following the construction of the railroad bridge due to the space constraints between new bridges and the Metro Bridge. With the bike-pedestrian bridge included, this would result in an overall construction duration of seven (7) years for Action Alternative A and 10 years and 3 months for Action Alternative B.

Table 1-1 | Summary of Potential Permanent Impacts to Key Resources

Impacts (Jurisdiction)	No Action Alternative	Action Alternative A (Preferred Alternative)	Action Alternative B	Additional Impacts due to Bike-Pedestrian Crossing
Human Environment				
Increased railroad service capacity across the Potomac River (VA and DC)	No	Yes **Major beneficial direct impacts**	Yes **Major beneficial direct impacts**	n/a
Increased train service frequency (VA and DC)	Yes, increased freight frequency and limited increase in passenger rail and commuter rail frequency **Beneficial direct impact**	Yes **Major beneficial direct impacts**	Yes **Major beneficial direct impacts**	n/a
Improved railroad operational flexibility (VA and DC)	No	Yes **Major beneficial direct impacts**	Yes **Major beneficial direct impacts**	n/a
Removal of spaces at National Park Service (NPS) Parking Lot C in West Potomac Park (DC)	No	50 out of 67 public parking spaces **Moderate adverse direct impacts**	50 out of 67 public parking spaces **Moderate adverse direct impacts**	Less space available for reconfiguration of remaining parking **Minor adverse direct impacts**
Removal of spaces at Washington Marina parking lot (DC)	No	1/3 of ~67 parking spaces at Washington Marina parking lot **Moderate adverse direct impacts**	1/3 of ~67 parking spaces at Washington Marina parking lot **Moderate adverse direct impacts**	n/a
Property impacts (VA and DC)	No	2.44 acres park property 0.22 acre private property **Minor adverse direct impacts**	2.45 acres park property 0.22 acre private property **Minor direct adverse impacts**	0.31 acre park property **Minor adverse direct impacts**
Exceedance of Federal Transit Authority (FTA) moderate noise criteria (VA)	No, but increased noise levels due to additional trains **Adverse direct impact**	2 locations in Long Bridge Park **Moderate adverse direct impact**	2 locations in Long Bridge Park **Moderate adverse direct impact**	None

Impacts (Jurisdiction)	No Action Alternative	Action Alternative A (Preferred Alternative)	Action Alternative B	Additional Impacts due to Bike-Pedestrian Crossing
Exceedance of FTA severe noise criteria (VA and DC)	No	3 locations: Long Bridge Park, Mandarin Oriental Hotel, and Portals V Residences **Major adverse direct impact**	3 locations: Long Bridge Park, Mandarin Oriental Hotel, and Portals V Residences **Major adverse direct impact**	None
Direct impact to Long Bridge Park (VA)	No	0.04 or 0.14 acre **Negligible adverse direct impact**	0.04 or 0.14 acre **Negligible adverse direct impact**	0.14 or 0.27 acre **Negligible adverse direct impact**
Direct impact to GWMP (VA)	No	0.4 or 0.5 acre **Minor adverse direct impact**	0.4 or 0.5 acre **Minor adverse direct impact**	0.5 or 0.6 acres **Minor adverse direct impact**
Vegetation removal within GWMP (VA)	No	Approx. 70 trees, including 3 larger trees (greater than 34-inch trunk diameter) **Moderate adverse direct impact**	98 trees, including 12 larger trees (greater than 34-inch trunk diameter) **Moderate adverse direct impact**	Less space available for replanting trees removed during construction **Minor adverse direct impact**
Direct impact to West Potomac Park (DC)	No	1.4 acres **Minor adverse direct impact**	1.5 acres **Minor adverse direct impact**	0.3 acres **Minor adverse direct impact**
Direct impact to East Potomac Park (DC)	No	0.5 acres **Minor adverse direct impact**	0.5 acres **Minor adverse direct impact**	None
Vegetation removal within East and West Potomac Parks (DC)	No	Approx. 160 trees, including 8 larger trees (greater than 34-inch trunk diameter) **Moderate adverse direct impact**	169 trees, including 9 larger trees (greater than 34-inch trunk diameter) **Moderate adverse direct impact**	None
Impact to views from GWMP (VA)	No	Yes **Minor to moderate adverse direct impact**	Yes, including removal of visual landmark (truss) **Moderate adverse direct impacts**	Yes **Moderate adverse direct impact**

Impacts (Jurisdiction)	No Action Alternative	Action Alternative A (Preferred Alternative)	Action Alternative B	Additional Impacts due to Bike-Pedestrian Crossing
Impact to views from MVT (VA)	No	Yes **Major adverse direct impact**	Yes, including removal of visual landmark (truss) **Major adverse direct impacts** Increased views towards Monumental Core **Minor beneficial direct impact**	Yes **Moderate adverse direct impact**
Impact to views from bridges spanning the Potomac River (DC)	No	Yes **Minor adverse direct impact**	Yes, including removal of visual landmark (truss) **Moderate adverse direct impact** Increased views of the river and ridgeline **Minor beneficial direct impact**	Yes **Minor adverse direct impact**
Impact to views from East Potomac Park (DC)	No	Yes, but minimized due to distance of the view and the number of bridges within the existing viewshed **Negligible adverse direct impact**	Yes, including removal of visual landmark (truss) **Moderate to major adverse direct impacts**	None
Impact to views from West Potomac Park (DC)	No	Yes, due to removal of mature trees and construction of retaining wall **Major adverse direct impact**	Yes, due to removal of mature trees and construction of retaining wall **Major adverse direct impact**	Yes **Negligible adverse direct impact**
Removal of contributing features to GWMP Historic District (VA)	No	Yes, vegetation **Moderate adverse direct impact**	Yes, vegetation and historic bridge **Major adverse direct impacts**	Yes, vegetation **Moderate adverse direct impact**
Visual changes to GWMP Historic District (VA)	No	Introduction of new bridge into viewshed **Minor adverse indirect impact**	Introduction of new bridge into viewshed and removal of existing bridge truss **Moderate adverse indirect impact**	Introduction of new bridge into viewshed **Negligible adverse indirect impact**

Impacts (Jurisdiction)	No Action Alternative	Action Alternative A (Preferred Alternative)	Action Alternative B	Additional Impacts due to Bike-Pedestrian Crossing
Removal of contributing features to Mount Vernon Memorial Highway (MVMH) Historic District (VA)	No	Yes, vegetation **Moderate adverse direct impact**	Yes, vegetation and historic bridge **Major adverse direct impacts**	Yes, vegetation **Moderate adverse direct impact**
Visual changes to MVMH Historic District (VA)	No	Introduction of new bridge into viewshed **Minor adverse indirect impact**	Introduction of new bridge into viewshed and removal of existing bridge truss **Moderate adverse indirect impact**	Introduction of new bridge into viewshed **Negligible adverse indirect impact**
Removal of contributing features to East and West Potomac Parks Historic District (DC)	No	Yes, vegetation (up to 4 Japanese cherry trees) **Moderate adverse direct impact**	Yes, vegetation (up to 7 Japanese cherry trees) and historic bridge **Major adverse direct impacts**	No, but construction of the crossing and access ramp would affect ability to replant Japanese cherry trees **Moderate adverse direct impact**
Visual changes to East and West Potomac Parks Historic District (DC)	No	Introduction of new bridge would obstruct views of Long Bridge **Moderate adverse indirect impact**	Introduction of new bridge into viewshed and removal of existing bridge truss **Moderate adverse indirect impact**	No
Natural Environment				
Natural habitat loss (VA and DC)	No	3.7 acres **Minor adverse direct impact**	4.2 acres **Minor adverse direct impact**	0.7 acres **Minor adverse direct impact**
Increase in impervious surface in Potomac River watershed (VA and DC)	No	1.9-acre increase **Minor adverse direct impact**	3.8-acre increase **Minor adverse direct impact**	1.3-acre increase **Minor adverse direct impact**
Decrease in impervious surface in District Municipal Separate Storm Sewer System (MS4) watershed (DC)	No	0.8-acre decrease **Negligible beneficial direct impact**	0.8-acre decrease **Negligible beneficial direct impact**	None

Impacts (Jurisdiction)	No Action Alternative	Action Alternative A (Preferred Alternative)	Action Alternative B	Additional Impacts due to Bike-Pedestrian Crossing
Impact to waters of the United States (DC)	No	0.5 acres **Minor adverse direct impact**	0.5 acres **Minor adverse direct impacts**	<0.02 acres **Minor adverse direct impact**
Impact to areas of the Potomac River below 2.5 meters in depth (riverine wetlands)	No	0.25 acres	0.25 acres	0.01 acres
Impact to Resource Protection Areas (VA)	No	0.2 acres **Minor adverse direct impact**	0.3 acres **Minor adverse direct impact**	0.15 acres **Minor adverse direct impact**

Table 1-2 | Summary of Potential Temporary Impacts to Key Resources During Construction

Impacts (Jurisdiction)	No Action Alternative	Action Alternative A (Preferred Alternative)	Action Alternative B	Additional Impacts due to Bike-Pedestrian Crossing
Human Environment				
Increased heavy truck traffic and intermittent short-term closures along Crystal Drive, Long Bridge Drive, and Boundary Channel Drive (VA)	No	4 years 2 months **Negligible to minor adverse direct impacts**	4 years 2 months **Negligible to minor adverse direct impacts**	Additional 2 years **Negligible to minor adverse direct impacts**
Intermittent traffic control measures, lane closures, and lane shifts on the GWMP (VA)	No	2 years **Moderate adverse direct impact**	5 years 2 months **Major adverse direct impact**	Additional 2 years **Minor adverse direct impact**
Intermittent traffic control measures, lane closures, and lane shifts on I-395 (DC)	No	4 years and 9 months **Major adverse direct impact**	4 years and 9 months **Major adverse direct impact**	No
Intermittent flagging/traffic control along Ohio Drive SW at NPS Parking Lot C in West Potomac Park (DC)	No	4 years 9 months **Negligible adverse direct impacts**	8 years 1 month **Minor adverse direct impact**	Additional 2 years **Negligible adverse direct impacts**
Intermittent traffic control measures, lane closures, and lane shifts on Maine Avenue SW (DC)	No	4 years 1 month **Major adverse direct impact**	4 years 1 month **Major adverse direct impact**	No
Interruptions to two-track railroad service (VA and DC)	Yes, due to projects included in the No Action Alternative **Adverse direct impact**	Limited outages over 5 years. Outages may depend on design and engineering developments **Moderate adverse direct impact**	Limited outages over 8 years 3 months. Outages may depend on design and engineering developments **Major adverse direct impact**	No

Impacts (Jurisdiction)	No Action Alternative	Action Alternative A (Preferred Alternative)	Action Alternative B	Additional Impacts due to Bike-Pedestrian Crossing
Service disruptions to Metrorail Yellow Line due to construction of new bridge over the Metrorail Portal (DC)	No	Yes, primarily during nights and weekends **Minor adverse direct impact**	Yes, primarily during nights and weekends **Minor adverse direct impact**	No
Impacts to local and commuter bus routes on I-395 and Maine Avenue SW (DC)	No	Yes **Moderate to major adverse direct impacts**	Yes **Moderate to major adverse direct impacts**	No
Realignment of MVT in GWMP (VA)	No	2 years **Moderate adverse direct impact**	5 years 2 months **Major adverse direct impact**	Additional 2 years **Moderate adverse direct impact**
Intermittent closures of pedestrian walkways in East and West Potomac Parks (DC)	No	4 years 9 months **Moderate adverse direct impact**	8 years 1 month **Major adverse direct impact**	Additional 2 years (on Ohio Drive near the Potomac River only) **Minor adverse direct impact**
Closure of Maine Avenue pedestrian bridge and Maine Avenue sidewalk (DC)	No	4 years 1 month **Moderate adverse direct impact**	4 years 1 month **Moderate adverse direct impact**	No
Periodic closure of Potomac River navigational GWMP channel and adjacent spans (DC)	No	3 years 4 months **Minor adverse direct impact**	8 years 1 month **Moderate adverse direct impact**	Additional 2 years **Minor adverse direct impact**
Exceedance of District daytime noise limits (DC)	No	3 locations **Moderate adverse direct impact**	3 locations **Moderate adverse direct impact**	No
Exceedance of District and Arlington nighttime noise limits (VA and DC)	No	Yes **Moderate adverse direct impact**	Yes **Moderate adverse direct impact**	Exceedance of Arlington limit at MVT **Minor adverse direct impact**

Impacts (Jurisdiction)	No Action Alternative	Action Alternative A (Preferred Alternative)	Action Alternative B	Additional Impacts due to Bike-Pedestrian Crossing
Construction staging impacts to Long Bridge Park (VA)	No	0.01 or 0.4 acres 4 years 2 months **Minor adverse direct impact**	0.01 or 0.4 acres 6 years 8 months **Minor adverse direct impact**	Same staging areas for additional 2 years **Minor adverse direct impact**
Construction staging and access impacts to GWMP and MVT (VA)	No	3.4 or 3.8 acres 3 years 4 months **Moderate adverse direct impact**	3.4 or 3.8 acres 8 years 1 month **Major adverse direct impacts**	Some of same staging areas for additional 2 years **Moderate adverse direct impact**
Construction staging and access impacts to East and West Potomac Parks (DC)	No	3.4 acres 4 years 9 months **Moderate adverse direct impact**	3.5 acres 8 years 1 month **Major adverse direct impact**	Some of same staging areas for additional 2 years **Moderate adverse direct impact**
Construction access impacts to Hancock Park (DC)	No	0.09 acres 3 years **Minor adverse direct impact**	0.09 acres 5 years **Minor adverse direct impact**	No
Construction activities visible from the GWMP and MVT (VA)	No	Yes **Major adverse direct impact**	Yes **Major adverse direct impact**	Yes, for an additional 2 years **Major adverse direct impact**
Construction activities visible from Long Bridge Park (VA)	No	Yes **Moderate adverse direct impact**	Yes **Moderate adverse direct impact**	Yes, for an additional 2 years **Moderate adverse direct impact**
Construction activities visible from Potomac River and Washington Channel (DC)	No	Yes **Moderate adverse direct impact**	Yes **Moderate adverse direct impact**	Yes (Potomac River only) **Moderate adverse direct impact**
Construction activities visible from East and West Potomac Parks and Monumental Core (DC)	No	Yes **Major adverse direct impact**	Yes **Major adverse direct impact**	Yes, for an additional 2 years **Major adverse direct impact**
Construction activities visible from L'Enfant Plaza and Southwest Waterfront (DC)	No	Yes **Major adverse direct impact**	Yes **Major adverse direct impact**	No

Impacts (Jurisdiction)	No Action Alternative	Action Alternative A (Preferred Alternative)	Action Alternative B	Additional Impacts due to Bike-Pedestrian Crossing
Construction staging and access within portions of the GWMP Historic District would be noticeable and would diminish integrity (VA)	No	Yes **Moderate adverse direct impact**	Yes **Moderate adverse direct impact**	Yes, for an additional 2 years **Moderate adverse direct impact**
Construction staging and access within portions of the MVMH Historic District would be noticeable and would diminish integrity (VA)	No	Yes **Moderate adverse direct impact**	Yes **Moderate adverse direct impact**	Yes, for an additional 2 years **Moderate adverse direct impact**
Construction staging and access within portions of the East and West Potomac Parks Historic District would be noticeable and would diminish integrity (DC)	No	Yes **Moderate adverse direct impact**	Yes **Moderate adverse direct impact**	Yes, for an additional 2 years **Moderate adverse direct impact**
Construction staging and access within portions of the National Mall Historic District would be noticeable and would diminish integrity (DC)	No	Yes **Moderate adverse direct impact**	Yes **Moderate adverse direct impact**	Yes, for an additional 2 years **Moderate adverse direct impact**
Community disruption due to impacts to traffic and pedestrian and bicycle facilities during construction (VA and DC)	No	Yes **Moderate adverse direct impact**	Yes **Moderate adverse direct impact**	Yes, for an additional 2 years **Minor adverse direct impact**

Impacts (Jurisdiction)	No Action Alternative	Action Alternative A (Preferred Alternative)	Action Alternative B	Additional Impacts due to Bike-Pedestrian Crossing
Annual direct jobs during construction (VA and DC)	No	1,822 jobs **Minor beneficial direct impact**	1,822 jobs **Minor beneficial direct impact**	Additional construction jobs commensurate with construction costs **Minor beneficial direct impact**
Annual indirect jobs during construction (VA and DC)	No	441 jobs **Minor beneficial indirect impact**	407 jobs **Minor beneficial indirect impact**	Additional construction jobs commensurate with construction costs **Minor beneficial direct impact**
Natural Environment				
Natural habitat loss (VA and DC)	No	6.4 acres **Minor adverse direct impact**	6.7 acres **Minor adverse direct impact**	No
Temporary fish habitat loss (DC)	No	0.7 acres **Minor adverse direct impact**	1.4 acres **Minor adverse direct impact**	No additional impact as piles would be driven without construction of cofferdams and dewatering
Impact to waters of the United States (DC)	No	1.1 acres **Minor adverse direct impact**	1.5 acres **Minor adverse direct impact**	No additional impact as piles would be driven without construction of cofferdams and dewatering
Impact to areas of the Potomac River below 2.5 meters in depth (riverine wetlands)	No	0.83 acre	0.96 acre	No additional impact as piles would be driven without construction of cofferdams and dewatering
Increase in vessel traffic and potential vessel strikes with fish (DC)	No	Yes **Minor adverse direct impact**	Yes **Minor adverse direct impacts**	Yes, for an additional 2 years **Minor adverse direct impact**
Displacement of species that use the existing bridge (DC)	No	No	Yes	No
Resource Protection Areas (RPAs) impacted (VA)	No	0.4 acres **Minor adverse direct impact**	0.6 acres **Minor adverse direct impacts**	No

Impacts (Jurisdiction)	No Action Alternative	Action Alternative A (Preferred Alternative)	Action Alternative B	Additional Impacts due to Bike-Pedestrian Crossing
Soil removed (VA and DC)	No	29,000 cubic yards **Minor adverse direct impact**	45,000 cubic yards **Minor adverse direct impact**	No
Concrete removed (VA and DC)	No	12,000 cubic yards **Minor adverse direct impact**	40,000 cubic yards **Minor adverse direct impact**	No
Steel removed (VA and DC)	No	3,000 cubic yards of steel **Minor adverse direct impact**	10,000 cubic yards of steel **Minor adverse direct impact**	No

1.2.3. Preferred Alternative

Action Alternative A achieves the Purpose and Need, represents the least environmentally damaging practicable alternative as compared with Action Alternative B, has lower capital costs, and has a shorter construction duration. Therefore, FRA identified Action Alternative A as the Preferred Alternative.

While substantive comments received during the public comment period included points of information, clarification, or correction, the comments received during the public comment period did not result in new information, additional analyses, or a change in the identification of the Preferred Alternative.

Differentiating benefits of the Preferred Alternative, compared to the No Action Alternative, include:

- **The Preferred Alternative meets the Purpose and Need by expanding the Long Bridge Corridor to four tracks:**
    - **The Preferred Alternative provides additional capacity to meet future demand:**
        - It provides additional capacity by eliminating the existing two-track bottleneck.
        - It accommodates combined commuter, intercity passenger, and freight railroad services into the future and accommodates increased passenger and freight train volumes.
        - It provides more tracks and crossovers to allow trains to pass each other.
        - It provides operators with the ability to expand service and recover from delays.
        - It provides sufficient capacity for freight trains to pass through the Corridor unimpeded by passenger trains during peak passenger train hours.
    - **The Preferred Alternative facilitates continued operations during planned maintenance or unanticipated outages:**
        - It provides more tracks to accommodate operational changes and delays.
        - It provides redundancy in tracks which minimizes the need to stop, reduce, or slow operations during track work.
    - **The Preferred Alternative facilitates access to existing stations, nodes, freight network, and trains:**
        - It provides more tracks which would ease the movement of people and goods and facilitate connections to other parts of the transportation network.
        - It meets the needs of regional, state, and local transportation plans, as well as railroad operator plans that assume the Corridor would continue to serve the movement of people and goods.

Differentiating benefits of the Preferred Alternative, compared to Action Alternative B, include:

- **The Preferred Alternative has fewer environmental impacts:** It results in fewer impacts since it only requires building new bridges parallel to the existing Long Bridge and railroad bridge over the GWMP versus demolishing the existing bridges and building two additional new bridges (the need for new and replacement bridges elsewhere in the Corridor would be the same for both

Action Alternatives). Demolition of the existing bridge and building two new bridges would have more environmental impacts.

- **The Preferred Alternative has lower capital costs:** It is anticipated to cost 30 percent less than the other Action Alternative at approximately $1.9 billion versus approximately $2.8 billion.
- **The Preferred Alternative has a shorter construction duration:** It is anticipated to take 5 years to construct compared to 8 years and 3 months for the other Action Alternative.

1.3. Public Outreach and Agency Coordination since Release of the DEIS

The following sections present information on public outreach and agency coordination conducted since the DEIS was released.

1.3.1. Notice of Availability

The EPA published its NOA for the Long Bridge Project DEIS in the Federal Register on Friday, September 13, 2019 which marked the beginning of the 45-day public comment period.[7] The review and comment period ended on October 28, 2019.

1.3.2. Distribution of DEIS

FRA and DDOT made available the DEIS including all appendices and supporting technical reports to Federal, District, state and local agencies, regional organizations, Federal, state, tribal, and local elected officials, potentially impacted Section 4(f) property officials with jurisdiction, stakeholders, and the general public for review and comment.

The DEIS was posted to the Project website, www.longbridgeproject.com. A notification of DEIS availability with a link to the website posting and a list of document availability locations was sent to the Project mailing list. DDOT and FRA also publicized availability of the DEIS via social media, including Twitter and Facebook. In addition to posting on the Project website, FRA and DDOT made hard copies of the DEIS available for review in the District at the DDOT Library and Southwest Interim Library, and in Arlington County at the Aurora Hills Library.

1.3.3. Public Hearing

On October 22, 2019, FRA and DDOT hosted a public hearing to obtain comments on the DEIS and Section 4(f) Evaluation. The meeting also served as part of concurrent consultation for Section 106 and provided opportunity for public comment on the Draft Programmatic Agreement (PA).

The open house format allowed participants the opportunity to review the informational exhibits covering the following topics:

- NEPA, Section 4(f), and Section 106 processes;
- Project background;
- Action Alternatives;
- Comparison of the Action Alternatives;

[7] 84 FR 48352. Accessed from https://www.govinfo.gov/content/pkg/FR-2019-09-13/pdf/2019-19813.pdf. Accessed December 9, 2019.

- Selection of the Preferred Alternative;
- Railroad bridge design options;
- Potential mitigation for impacts to resources protected under Section 4(f) (bike-pedestrian crossing); and
- Section 106 adverse effects to historic properties and potential resolution of adverse effects.

The informational exhibits consisted of 18 display boards and two roll plots. The two roll plots depicted Action Alternatives A and B and highlighted key environmental impacts. At 4:30 PM and 6:00 PM, DDOT and FRA gave a presentation elaborating on the information included on the boards. The presentation was the same both times.

1.3.4. DEIS Comments Received

Attendees were invited to provide comments in person at the public hearing, by speaking directly to the court reporter, speaking during the public comment session following each presentation, or by submitting written comment cards. Attendees were also encouraged to submit comments via email to info@longbridgeproject.com. Eight attendees spoke during the public comment session and two attendees provided comments directly to the court reporter. Another four attendees submitted written comments on the comment cards provided and using the comment section of the Title VI questionnaire. FRA, DDOT, and DRPT have responded to these comments in the FEIS, along with all comments received via email or U.S. postal mail through October 28, 2019. Common comment categories and responses are included in **Appendix F, Common Comment Categories with Responses**, and the full text of the comments can be found in **Appendix G, Copies of All Public Comments.**

Over 900 comments were received during the public comment period, including two form letters that generated the majority of comments. Comments touched on the following topics (this list is not comprehensive):

- Support for the Preferred Alternative (including 432 form letter comments)
    - Comments related to design, construction, and operation of the Preferred Alternative included:
        - Including electrification as part of the design
        - Dedicating the new bridge solely to passenger rail operations
        - Ensuring safe operations under the Maryland Avenue SW overbuild
        - Designing bridge to accommodate future demand
        - Considering longer shutdowns during construction to shorten overall construction duration
        - Ensuring that the new infrastructure has been designed to be resilient to climate change
        - Designing the new infrastructure to enable higher speeds through the corridor
- Comments related to impacts included:
    - Concern over impacts due to stormwater runoff from the new bridge
    - Impacts to Washington Marina operations due to loss of parking
    - Ensuring consistency with local and Federal land use plans
    - Impacts to parklands
    - Impacts to the transportation network during construction

- Comments related to mitigation included:
    - Painting the existing bridge to mitigate visual impacts
- Support for the bike-pedestrian crossing (including 376 form letter comments)
    - Comments related to the bike-pedestrian crossing included:
        - Connecting the bike-pedestrian crossing across the Washington Channel to destinations in the District
        - Ensuring the bike-pedestrian crossing is designed with sufficient width to accommodate bicyclists and pedestrians comfortably
        - Removing the 90-degree angle at ramps so bicyclists do not have to dismount
        - Ensuring the bike-pedestrian bridge is constructed along with the railroad bridge

1.3.5. Agency Coordination

Following publication of the DEIS, FRA and DDOT continued coordination with Cooperating and Participating agencies to resolve outstanding issues, share information and findings related to permitting or other approvals, and ensure a smooth transition to the next phase of project development. FRA, DDOT, and DRPT met weekly on issues related to DRPT's responsibilities as Project Sponsor during design and construction. Issues addressed included permitting requirements, authorities for transfer of sufficient interests in NPS lands to DRPT for the Long Bridge Project, property owner concerns, and mitigation commitments. As part of these discussions, FRA determined that, given DRPT's role as the Project Sponsor for future phases and DRPT's request to be a joint-lead agency, it was appropriate for DRPT to be made a joint-lead agency. Additional agency coordination included but was not limited to:

- FRA, DDOT, and DRPT met regularly with **NPS** to resolve mitigation needs for impacts to parklands and historic properties.
- FRA coordinated with the **United States Coast Guard (USCG)** regarding navigation clearance requirements and bridge permitting.
- FRA, DDOT, and DRPT coordinated with the **District of Columbia State Historic Preservation Office (DC SHPO), Virginia Department of Historic Resources (VDHR), and National Capital Planning Commission (NCPC)** regarding mitigation for impacts to historic properties.
- FRA, DDOT, and DRPT coordinated with **Arlington County, NPS,** and **DC SHPO** regarding the Section 4(f) determination for properties for which they serve as Officials with Jurisdiction.
- FRA coordinated with the **United States Army Corps of Engineers (USACE)** regarding its authorities and Section 408 review.
- FRA coordinated with **NCPC** regarding timing and requirements for NCPC review and approval of the Project, including issuance of a ROD.

1.4. DEIS Errata Sheets and Other Changes

Errata sheets are being used for the Long Bridge FEIS in lieu of rewriting the DEIS. This approach is appropriate because the comments received on the DEIS were minor and responses to those comments are limited to factual corrections or clarifications. The DEIS errata sheets are included in this combined FEIS/ROD and are also available on the Project website. **Table 1-3** below provides the errata sheet and the corrected text or clarification.

Table 1-3 | DEIS Errata Sheet

ID	Chapter	Page #	Line #	FEIS Corrected Text/Clarification
01	Chapter 1, Introduction	1-1	10	*Add new footnote at end of paragraph:* "Recognizing that in December of 2019, CSX and Commonwealth reached an agreement regarding the railroad right-of-way and infrastructure within the Project Corridor, the EIS does not define or resolve, and is not to be interpreted as bearing on the resolution of: • Ownership, maintenance, and governance of any newly constructed tracks; • Amount of compensation owed to property owners whose rights would be impacted by the Project; • Permission to construct the Project, which must be granted by CSXT, the owner of the existing Long Bridge Corridor; • Other permits and permissions necessary to lawfully construct the Project; or • Operating rights of the various operators to use any newly constructed tracks. These issues are not relevant to the analysis of environmental impacts. They will be resolved in future phases of project development and implementation."
02	Chapter 1, Introduction	1-6	150	*Add new paragraph:* While not a Cooperating Agency, the Federal Highway Administration (FHWA) will need to concur with any additional use of air rights over I-395 for railroad bridge(s). FHWA has elected to act as a Participating Agency and has prepared their own Categorical Exclusion (CE) for this action.
03	Chapter 2, Purpose and Need	2-10	259	*After "East Potomac Park," add* "West Potomac Park"
04	Chapter 2, Purpose and Need	2-10	271	*After "GWMP" add* "West Potomac Park."

ID	Chapter	Page #	Line #	FEIS Corrected Text/Clarification
05	Chapter 3, Alternatives	3-16	Table 3-8	*Add row for the Potomac River Tunnel Project with the following information:* Project: DC Clean Rivers Project, Potomac River Tunnel Location: Potomac River from Georgetown to Joint Base Anacostia-Bolling Description: Construct a tunnel and supporting infrastructure to provide control for seven Combined Sewer Overflow outfalls along the Potomac River. Year Complete: 2030 Reference: Potomac River Tunnel Project Website (https://www.dcwater.com/projects/potomac-river-tunnel-project)
06	Chapter 3, Alternatives	3-17	Figure 3-6	*Add Potomac River Tunnel to map of No Action Alternative Projects*
07	Chapter 3, Alternatives	3-18	261	*Add text:* "The No Action Alternative also includes the Potomac River Tunnel Project, which involves construction of a bored tunnel located approximately 75 to 125 feet below the ground surface. The proposed tunnel would pass underneath the 14th Street Bridge Complex in the Local Study Area."
08	Chapter 3, Alternatives	3-18	262-265	*Delete sentence:* "Because no non-transportation projects are within the footprint of the Project, the No Action Alternative includes only transportation projects and maintenance projects necessary to keep the existing bridge and Corridor in service." *Add replacement text:* "With the exception of the Potomac River Tunnel, no non-transportation projects are within the footprint of the Project. Therefore, the No Action Alternative includes primarily transportation projects and maintenance projects necessary to keep the existing bridge and Corridor in service."
09	Chapter 3, Alternatives	3-30	517	*Following "available capacity limits" add:* "CSXT actual freight growth may be greater or less than the assumed volume based on market demands."
10	Chapter 3, Alternatives	3-36	Figure 3-18	*Revise figure to show temporary impacts at Washington Marina commensurate with impacts shown in* ***Figure 1-1, Errata Sheet Exhibit A.***
11	Chapter 3, Alternatives	3-38	Figure 3-19	*Revise figure to show temporary impacts at Washington Marina commensurate with impacts shown in* ***Figure 1-1, Errata Sheet Exhibit A.***

ID	Chapter	Page #	Line #	FEIS Corrected Text/Clarification
12	Chapter 3, Alternatives	3-39	Table 3-10	*Hancock Park row revise to read* "Access to railroad to transport equipment, materials, and crew."
13	Chapter 3, Alternatives	3-43	Table 3-11	*Hancock Park row revise to read* "Access to railroad to transport equipment, materials, and crew."
14	Chapter 3, Alternatives	3-45	832	*After "GWMP," add* "West Potomac Park."
15	Chapter 5, Natural Ecological Systems and Endangered Species	5-10	221	*After "(GWMP)," add* "West Potomac Park."
16	Chapter 5, Natural Ecological Systems and Endangered Species	5-14	244	*After "East Potomac Park" add* "and West Potomac Park."
17	Chapter 5, Natural Ecological Systems and Endangered Species	5-14	261	*After "GWMP," add* "West Potomac Park."
18	Chapter 5, Natural Ecological Systems and Endangered Species	5-12	Figure 5-5	*Revise figure to show temporary impacts at Washington Marina commensurate with impacts shown in* ***Figure 1-1, Errata Sheet Exhibit A.***
19	Chapter 5, Natural Ecological Systems and Endangered Species	5-16	Figure 5-8	*Revise figure to show temporary impacts at Washington Marina commensurate with impacts shown in* ***Figure 1-1, Errata Sheet Exhibit A.***
20	Chapter 5, Natural Ecological Systems and Endangered Species	5-16	312	*Add the following text:* "Construction of Action Alternative A would have minor direct adverse impact on submerged aquatic vegetation (SAV) in the amount of approximately 7,851 square feet associated with the temporary barge pier located along the northern shoreline of the Potomac River just upstream from Long Bridge. Given the length of time the pier would be in place (almost 5 years), it is possible that SAV would not rebound following construction, and therefore this impact is considered permanent."
21	Chapter 5, Natural Ecological Systems and Endangered Species	5-24	461-463	*Delete text reading:* "Action Alternative A would have minor temporary direct adverse impact on SAV in the amount of approximately 7,851 square feet associated with the temporary

ID	Chapter	Page #	Line #	FEIS Corrected Text/Clarification
				barge pier located along the northern shoreline of the Potomac River just upstream from Long Bridge."
22	Chapter 6, Water Resources and Water Quality	6-6	159	*Change "Eastern Mountains and Piedmont Region" to* "Atlantic and Gulf Coastal Plain Region."
23	Chapter 6, Water Resources and Water Quality	6-22	Figure 6-5	*Revise figure to show temporary impacts at Washington Marina commensurate with impacts shown in* ***Figure 1-1, Errata Sheet Exhibit A.***
24	Chapter 6, Water Resources and Water Quality	6-23	Figure 6-6	*Revise figure to show temporary impacts at Washington Marina commensurate with impacts shown in* ***Figure 1-1, Errata Sheet Exhibit A.***
25	Chapter 7, Geologic Resources	7-9	223	*After "East Potomac Park," add* "West Potomac Park."
26	Chapter 9, Transportation and Navigation	9-11	211	*Revise "the National Mall and in East Potomac Park" to:* "the National Mall, East Potomac Park, and West Potomac Park."
27	Chapter 9, Transportation and Navigation	9-11	216-217	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
28	Chapter 9, Transportation and Navigation	9-14	246	*Revise sentence to read:* "Surface parking within East and West Potomac Parks provides 289 public parking spaces."
29	Chapter 9, Transportation and Navigation	9-14	Table 9-3	*Add the following under "Users" for the Washington Marina parking lot:* "and monthly permit holders."
30	Chapter 9, Transportation and Navigation	9-15	280	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
31	Chapter 9, Transportation and Navigation	9-17	313	*Add new paragraph starting on Line 313:* "Within the Local Study Area, climate change is projected to increase the frequency and intensity of extreme weather events, including heavy rain and

ID	Chapter	Page #	Line #	FEIS Corrected Text/Clarification
				heatwaves. In addition, flooding is expected to become more common.[22] The No Action Alternative would not affect the resiliency of railroad infrastructure and service within the corridor. Risks due to climate change would include: • Increased risk of heat exposure and heat-related illness to outdoor workers; • Increased risk of buckling along the railroad tracks; • Increased likelihood of soil slumping and slope failure along embankments due to increased precipitation; and • Increased risk of damage and service delays due to fallen trees and debris from high wind, ice storms, and other severe storm events. The No Action Alternative would not experience increased risk of damage or service delays due to flooding, as the railroad bridges and embankments are located above the floodplain, even with anticipated sea level rise." *Add new footnote 22:* [22]*Resilient DC. A Strategy to Thrive in the Face of Change*, page 80. Accessed from https://resilient.dc.gov/. Accessed December 12, 2019. *Renumber subsequent footnotes.*
32	Chapter 9, Transportation and Navigation	9-17	325	*Add new paragraph starting on Line 313:* "The resilience of the Action Alternative A railroad infrastructure and service to the effects of climate change would be similar as to the No Action Alternative. However, the replacement of several embankments with retaining walls would reduce the risk of slope failure due to increased precipitation."
33	Chapter 9, Transportation and Navigation	9-17	330	*Add new paragraph following Line 330:* "The resilience of the Action Alternative B railroad infrastructure and service to the effects of climate change would be the same as for Action Alternative A."
34	Chapter 9, Transportation and Navigation	9-18	348	*Add new paragraph starting on Line 348:*

ID	Chapter	Page #	Line #	FEIS Corrected Text/Clarification
				"The No Action Alternative would not affect the resiliency of railroad infrastructure and service within the corridor. Risks due to climate change would include: • Increased risk of heat exposure and heat-related illness to outdoor workers; • Increased risk of buckling along the railroad tracks; • Increased likelihood of soil slumping and slope failure along embankments due to increased precipitation; and • Increased risk of damage and service delays due to fallen trees and debris from high wind, ice storms, and other severe storm events. The No Action Alternative would not experience increased risk of damage or service delays due to flooding, as the railroad bridges and embankments are located above the floodplain, even with anticipated sea level rise."
35	Chapter 9, Transportation and Navigation	9-19	356	*Add new paragraph starting on Line 356:* "The resilience of the Action Alternative A railroad infrastructure and service to the effects of climate change would be similar to the No Action Alternative. However, the replacement of several embankments with retaining walls would reduce the risk of slope failure due to increased precipitation."
36	Chapter 9, Transportation and Navigation	9-19	362	*Add new paragraph starting on Line 362:* "The resilience of the Action Alternative B railroad infrastructure and service to the effects of climate change would be the same as Action Alternative A."
37	Chapter 9, Transportation and Navigation	9-21	434	*Change "East Potomac Park" to* "West Potomac Park."
38	Chapter 9, Transportation and Navigation	9-21	436	*Change "East Potomac Park" to* "West Potomac Park."

ID	Chapter	Page #	Line #	FEIS Corrected Text/Clarification
39	Chapter 9, Transportation and Navigation	9-21	438	*Change "of approximately 88 spaces" to "of 67 spaces in the lot closest to the railroad corridor."*
40	Chapter 9, Transportation and Navigation	9-23	510	*Add new sentence following sentence reading "The contractor and operators would schedule interruptions to two-track service to complete track shifts and realignments primarily for nights and weekends and would keep interruptions to a minimum:"* "While scheduling interruptions to two-track service for nights and weekends would minimize disruptions to commuter and passenger rail service, these interruptions would disproportionately impact CSXT's freight operations, which predominantly occur on nights and weekends to prioritize passenger train traffic during prime commuting hours."
41	Chapter 9, Transportation and Navigation	9-23	510-516	*Delete text as indicated below:* Outages would be further defined during final design, but it is anticipated that over the duration of the project, there would be ~~seven night outages, one day outage, and three 55-hour~~ weekend outages that would affect maintaining two-track operations. ~~Additional outages may be required; however, they are not 514 anticipated to affect two-track operations.~~ These outages assume work forces will have full on-track time during the outage to complete the work and do not include foul time, which may be needed for adjacent track construction or material transport.
42	Chapter 9, Transportation and Navigation	9-25	566	*Change "East Potomac Park" to* "West Potomac Park."
43	Chapter 9, Transportation and Navigation	9-28	626	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
44	Chapter 9, Transportation and Navigation	9-29	643	*Revise "East Potomac Park" to read "*East and West Potomac Parks."

ID	Chapter	Page #	Line #	FEIS Corrected Text/Clarification
45	Chapter 9, Transportation and Navigation	9-32	765-766	*Delete sentence:* "The temporary closure of the surface parking at the Washington Marina for approximately 4 years and 1 month would be considered a major impact because it constitutes the entirety of the marina's parking." *Replace with sentence:* "The temporary closure of a portion of the surface parking at the Washington Marina, combined with the use of periodic flagging for movement of construction equipment and vehicles, would be considered a moderate impact because it would inconvenience marina customers."
46	Chapter 9, Transportation and Navigation	9-37	937	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
47	Chapter 10, Air Quality and Greenhouse Gases	10-2	43	*Add new footnote 6 after footnote 5:* [6]40 CFR Part 93 Subpart B and 40 CFR 93.153 *Renumber subsequent footnotes.*
48	Chapter 10, Air Quality and Greenhouse Gases	10-2	44	*Add new footnote 7 after text reading "General Conformity determination:"* [7]40 CFR Part 93 Subpart B and 40 CFR 93.153 *Renumber subsequent footnotes.*
49	Chapter 10, Air Quality and Greenhouse Gases	10-2	53-54	*Revise sentence "Arlington County does not have regulations or ordinances that govern air pollutant emissions" to:* "Arlington County falls within the Washington DC-Maryland (MD)-Virginia (VA) area for EPA designations and therefore is subject to the Virginia laws and regulations as well as the Federal Clean Air Act (CAA)."
50	Chapter 10, Air Quality and Greenhouse Gases	10-4	101	*Add sentence at the end of the paragraph:* "The Project is in the Washington, DC-MD-VA marginal nonattainment area for the 2015 8-hour ozone National Ambient Air Quality Standards (NAAQS). Therefore, pursuant to the General Conformity rule at 40 CFR Part 93 Subpart B and 40 CFR 93.153, a General Conformity applicability analysis is required."
51	Chapter 10, Air Quality and Greenhouse Gases	10-5	138-141	*Replace text reading "The EPA designates the District and Arlington County as nonattainment areas for 8-hour O3 and maintenance areas for CO and PM2.5"* with

ID	Chapter	Page #	Line #	FEIS Corrected Text/Clarification
				"The District and Arlington County are designated as marginal nonattainment for the 2015 8-hour ozone NAAQS. Both are maintenance areas for the 2008 8-hour ozone NAAQS." *Add new footnote 12:* [12]United States Environmental Protection Agency, Nonattainment Areas for Criteria Pollutants (Greenbook), https://www.epa.gov/green-book *Renumber subsequent footnotes*
52	Chapter 10, Air Quality and Greenhouse Gases	10-9	220	*Add text at end of paragraph:* "Implementation of additional passenger and commuter rail service under Action Alternative A would likely result in a shift of travelers from automobiles to rail. However, potential reduction in greenhouse gas (GHG) emissions would be dependent upon variables including fuel mix which are not known at this time."
53	Chapter 10, Air Quality and Greenhouse Gases	10-6	143-150	*Delete lines 143-150 (Section 10.3.2, Air Quality Index):* *"The AQI is a metric for metropolitan areas to report on the daily air quality and associated health effects that may results from air pollution. The EPA calculates the AQI based on five major air pollutants in the CAA: ground-level O3, particle pollution, CO, SO2, and NO2. The primary focus of the AQI is on O3 and PM, as these pose the greatest risk to human health.* *The AQI has six categories to determine the level of health concern (Table 10-2). The EPA considers an AQI of less than 100 as generally satisfactory except for particularly sensitive groups. As levels increase, they become unhealthy for all groups."*
54	Chapter 12, Land Use and Property	12-5	110	*Add new sentence following "publicly owned land:"* "The Washington Marina operates from a parcel abutting the railroad corridor between Maine Avenue and the Washington Channel, which is leased from the District of Columbia."
55	Chapter 12, Land Use and Property	12-6	Table 12-1	*Revise last row to read:* • National Mall open space and museums

ID	Chapter	Page #	Line #	FEIS Corrected Text/Clarification
				• West Potomac Park (Federal parkland, Tidal Basin, Jefferson Memorial, NPS Parking Lots A, B, and C) • East Potomac Park (Federal parkland, golf course, tennis facility, NPS and United States Park Police, DOD facility, NPS maintenance facility) • Railroad right-of-way and highways (US-1 and I-395)
56	Chapter 12, Land Use and Property	12-8	Table 12-2	*Add row to L'Enfant Plaza and Near Southwest – South subsection:* Property Description: Maiden Lane Ownership: DDOT
57	Chapter 12, Land Use and Property	12-18	Figure 12-9	*Revise figure to show refined temporary impact area at Washington Marina (see **Figure 1-1, Errata Sheet Exhibit A**).*
58	Chapter 12, Land Use and Property	12-20	245	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
59	Chapter 12, Land Use and Property	12-20	248-249	*Replace sentence "Affected property owned by NPS will require an exchange of land or a transfer of jurisdiction" with:* "Affected property owned by NPS will require transfer of sufficient interests in NPS lands to DRPT for the new right-of-way. Potential mechanisms could include an exchange of land in accordance with 54 USC 102901(b) or congressional authorization."
60	Chapter 12, Land Use and Property	12-20	249-250	*Revise text reading: "In addition, airspace approval would be required from FHWA for the new railroad bridge over I-395."* "In addition, airspace approval would be required from DDOT for the new railroad bridge over I-395."
61	Chapter 12, Land Use and Property	12-20	261	*Add new paragraph:* "The existing railroad right-of-way is owned by CSXT. Action Alternative A would require CSXT to commit a significant portion of its right-of-way to new tracks and ancillary structures, which would be used primarily for passenger operations. The specific nature of the impacts would be determined during later phases of project development, based on agreements between CSXT, DDOT, and Virginia Department of Rail and Public Transportation (DRPT).

ID	Chapter	Page #	Line #	FEIS Corrected Text/Clarification
				On December 19, 2019, the Commonwealth of Virginia and CSXT announced an agreement for Virginia to acquire approximately one-half of the CSXT-owned right-of-way between the District and Richmond, Virginia. The specifics of that agreement will determine the impacts to CSXT-owned right-of-way"
62	Chapter 12, Land Use and Property	12-20	264	*Change "East Potomac Park" to* "West Potomac Park."
63	Chapter 12, Land Use and Property	12-21	Table 12-3	*Revise impact area in East Potomac Park from 2.4 acres to 0.5 acres*
64	Chapter 12, Land Use and Property	12-21	Table 12-3	*Add row below "East Potomac Park:"* Description: West Potomac Park GIS Parcel ID: 03160005 Sub-Area: Monumental Core Impact Area (Acres): 1.4
65	Chapter 12, Land Use and Property	12-21	Table 12-3	*In the "Property Description/Ownership" column, revise "Washington Marina" to read:* "Washington Marina (leased from the District of Columbia; title held in part by the United States)"
66	Chapter 12, Land Use and Property	12-21	Table 12-3	*In the "Property Description/Ownership" column for Parcel 0352 0823, revise "NPS" to read:* "NPS (Reservation 198)"
67	Chapter 12, Land Use and Property	12-21	Table 12-3	*Add note:* "Air rights over DDOT-owned right-of-way (I-395 and Maine Avenue SW) are not considered property impacts and are therefore not included in this table."
68	Chapter 12, Land Use and Property	12-24	345	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
69	Chapter 12, Land Use and Property	12-24	349-350	*Revise sentence, "Within East Potomac Park, construction activities would affect two surface parking areas and two ballfields" to:* "Construction activities would affect two surface parking areas in West Potomac Park and one ballfield in East Potomac Park."
70	Chapter 12, Land Use and Property	12-25	351	*Revise "East Potomac Park" to read "*East and West Potomac Parks."

ID	Chapter	Page #	Line #	FEIS Corrected Text/Clarification
71	Chapter 12, Land Use and Property	12-25	355-356	*Revise sentence, "Open space at the south end of Long Bridge Park (negligible adverse direct impact, as park uses would remain undisturbed)" to:* "Privately-owned publicly accessible open space at the northern end of Crystal Drive, south of the entrance to Long Bridge Park (negligible adverse direct impact, as park uses would remain undisturbed)."
72	Chapter 12, Land Use and Property	12-25	363-364	*Revise sentence, "Washington Marina parking lot (major direct adverse impact, as temporary loss of parking would impact the use and operation of the business)" to:* "Washington Marina parking lot (moderate direct adverse impact, as temporary closure of a portion of the surface parking lot, combined with the use of periodic flagging for movement of construction equipment and vehicles, would inconvenience marina customers)."
73	Chapter 12, Land Use and Property	12-25	361	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
74	Chapter 12, Land Use and Property	12-25	373	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
75	Chapter 12, Land Use and Property	12-29	399	*Change "use of its surface parking" to* "use of a portion of its surface parking."
76	Chapter 12, Land Use and Property	12-29	399-401	*Revise sentence, "Without mitigation, this use of the marina's surface parking area would affect its ability to operate, since many of the marina users access the facility by car" to:* This use of the marina's parking lot would inconvenience marina customers, since many of them access the facility by car."
77	Chapter 12, Land Use and Property	12-31	439-440	*Revise sentence, "Potential mechanisms could include a transfer of jurisdiction or an exchange of land in accordance with 54 USC 102901(b) or other applicable authorities" to:* "Potential mechanisms could include an exchange of land in accordance with 54 USC 102901(b), or congressional authorization to transfer sufficient interests in NPS lands to DRPT for the Long Bridge Project."
78	Chapter 12, Land Use and Property	12-31	441-442	*Revise sentence, "If a land exchange is required, DRPT and NPS would identify appropriate properties for the exchange during final design" to:*

ID	Chapter	Page #	Line #	FEIS Corrected Text/Clarification
				"If a land exchange is pursued, DRPT and NPS would identify appropriate properties for the exchange following completion of the NEPA process."
79	Chapter 12, Land Use and Property	12-29	Table 12-4	*Revise impact area for Washington Marina from 0.76 acre to 0.22 acre*
80	Chapter 12, Land Use and Property	12-29	393	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
81	Chapter 12, Land Use and Property	12-29	Table 12-4	*Revise impact area in East Potomac Park from 4.8 acres to 2.1 acres*
82	Chapter 12, Land Use and Property	12-29	Table 12-4	*Add row below "East Potomac Park:"* Description: West Potomac Park GIS Parcel ID: 03160005 Impact Area (Acres): 1.3
83	Chapter 12, Land Use and Property	12-29	Table 12-4	*In the "Property Description/Ownership" column, revise "Washington Marina" to read:* "Washington Marina (leased from the District of Columbia)"
84	Chapter 12, Land Use and Property	12-29	Table 12-4	*Revise total impact area from 12.3 acres to 11.76*
85	Chapter 12, Land Use and Property	12-29	398-399	*Revise sentence to read:* "Action Alternative A would result in a moderate temporary direct adverse impact to the property Washington Marina leases from the District of Columbia through use of *a portion of* the surface parking for approximately 4 years and 1 month."
86	Chapter 12, Land Use and Property	12-30	431-432	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
87	Chapter 12, Land Use and Property	12-31	439	*Add after "appropriate mechanism:"* "that may include an exchange of land or congressional authorization to transfer sufficient interests in NPS lands to DRPT for the Long Bridge Project."
88	Chapter 12, Land Use and Property	12-31	439 - 440	*Revise sentence to read:* "Other potential mechanisms could include an exchange of land in accordance with 54 USC 102901(b) or congressional authorization to transfer sufficient interests in NPS lands to DRPT for the Long Bridge Project."

ID	Chapter	Page #	Line #	FEIS Corrected Text/Clarification
89	Chapter 13, Noise and Vibration	13-4	110	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
90	Chapter 13, Noise and Vibration	13-5	110	*Revise "such as the seawall surrounding East Potomac Park and the Jefferson Memorial Ashlar Seawall" to read:* "such as the seawall surrounding East and West Potomac Parks, the Washington Marina seawall, and the Jefferson Memorial Ashlar Seawall …"
91	Chapter 13, Noise and Vibration	13-13	317-318	*Revise "East Potomac Park Seawall" to read "seawall surrounding East and West Potomac Parks."*
92	Chapter 13, Noise and Vibration	13-16	403	*Change "Since the sensitivity of the Jefferson Memorial Ashlar Seawall to vibration…" to:* "Since the sensitivity of the East and West Potomac Parks and Washington Marina Club seawalls to vibration…"
93	Chapter 13, Noise and Vibration	13-7	158	*Add text after last sentence:* "The train volumes in the No Action Alternative were developed based on recent trends for freight demand to inform the evaluation of the alternatives. Actual train volumes in 2040 could be greater or less than the assumed volume based on market demands."
94	Chapter 13, Noise and Vibration	13-10	212	*Add text after "increase the number of train operations:"* "Action Alternative A would also increase the track curvature near the Mandarin Oriental Hotel which could potentially increase the likelihood or intensity of wheel squeal conditions."
95	Chapter 13, Noise and Vibration	13-13	304	*Change text reading "If construction occurred at night…" to:* "When construction occurs at night…. "
96	Chapter 13, Noise and Vibration	13-15	369	*Change text reading "By eliminating…" to* "By reducing…"
97	Chapter 13, Noise and Vibration	13-15	372	*Add text after "the noise conditions:"*

ID	Chapter	Page #	Line #	FEIS Corrected Text/Clarification
				"As the track design advances, the potential for wheel squeal to occur due to the increased track curvature would be considered and the effectiveness of noise mitigation measures would be evaluated."
98	Chapter 14, Aesthetics and Visual Resources	14-5	126	*Change "bisects East Potomac Park" to* "crosses East and West Potomac Parks, between which it forms the boundary,"
99	Chapter 14, Aesthetics and Visual Resources	14-7	190	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
100	Chapter 14, Aesthetics and Visual Resources	14-8	214	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
101	Chapter 14, Aesthetics and Visual Resources	14-8	214	*Change "A view from East Potomac Park" to* "A view from West Potomac Park."
102	Chapter 14, Aesthetics and Visual Resources	14-8	218	*After "northwest" add "*from East Potomac Park."
103	Chapter 14, Aesthetics and Visual Resources	14-8	230-231	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
104	Chapter 14, Aesthetics and Visual Resources	14-9	249	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
105	Chapter 14, Aesthetics and Visual Resources	14-11	297	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
106	Chapter 14, Aesthetics and Visual Resources	14-11	299	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
107	Chapter 14, Aesthetics and Visual Resources	14-22	412	*Change "East Potomac Park" to* "West Potomac Park."
108	Chapter 14, Aesthetics and Visual Resources	14-26	Table 14-3	*In "Location" column revise "East Potomac Park" to read "*East and West Potomac Parks."
109	Chapter 14, Aesthetics and Visual Resources	14-26	Table 14-3	*In "Impact Description" column revise "East Potomac Park" to read "*East and West Potomac Parks."
110	Chapter 14, Aesthetics and Visual Resources	14-26	488	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
111	Chapter 14, Aesthetics and Visual Resources	14-26	489	*Revise "East Potomac Park" to read "*East and West Potomac Parks."

ID	Chapter	Page #	Line #	FEIS Corrected Text/Clarification
112	Chapter 14, Aesthetics and Visual Resources	14-26	491	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
113	Chapter 14, Aesthetics and Visual Resources	14-27	494	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
114	Chapter 14, Aesthetics and Visual Resources	14-27	526	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
115	Chapter 15, Cultural Resources	15-9	171	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
116	Chapter 15, Cultural Resources	15-9	176	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
117	Chapter 15, Cultural Resources	15-12	208	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
118	Chapter 16, Recreation and Parks	16-4	Table 16-1	*In row for East Potomac Park, delete:* • Thomas Jefferson Memorial • George Mason Memorial • Tidal Basin
119	Chapter 16, Recreation and Parks	16-4	Table 16-1	*In row for West Potomac Park, add:* • Thomas Jefferson Memorial • George Mason Memorial
120	Chapter 16, Recreation and Parks	16-6	Table 16-2	*Revise second column from "Acres of Park in Local Study Area" to* "Total Park Area (Acres)"
121	Chapter 16, Recreation and Parks	16-6	Table 16-2	*Revise impact to East Potomac Park from 2.4 acres to 0.5 acres and revise percent impact from <0.1% to <0.01%*
122	Chapter 16, Recreation and Parks	16-6	Table 16-2	*Add row:* Name: West Potomac Park Total Park Acres: 400 Acres of Direct Permanent Impact: 1.4 Percent Direct Permanent Impact: <0.01%
123	Chapter 16, Recreation and Parks	16-8	Figure 16-3	*Revise "East Potomac Park" to read "*East and West Potomac Parks."

ID	Chapter	Page #	Line #	FEIS Corrected Text/Clarification
124	Chapter 16, Recreation and Parks	16-9	Figure 16-4	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
125	Chapter 16, Recreation and Parks	16-10	109	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
126	Chapter 16, Recreation and Parks	16-10	110	*Change "park" to* "parks."
127	Chapter 16, Recreation and Parks	16-10	130	*Change "East Potomac Park" to* "West Potomac Park."
128	Chapter 16, Recreation and Parks	16-11	145	*Change "East Potomac Park" to* "West Potomac Park."
129	Chapter 16, Recreation and Parks	16-12	Table 16-3	*Revise impact to East Potomac Park from 4.7 acres to 2.1 acres and revise percent impact from <1.4% to <0.01%*
130	Chapter 16, Recreation and Parks	16-12	Table 16-3	*Add row:* Name: West Potomac Park Total Park Acres: 400 Acres of Temporary Impact from Action Alternative A: 1.3 Percent Temporary Impact: <0.01%
131	Chapter 16, Recreation and Parks	16-12	189	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
132	Chapter 16, Recreation and Parks	16-13	208	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
133	Chapter 16, Recreation and Parks	16-13	209	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
134	Chapter 16, Recreation and Parks	16-13	233	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
135	Chapter 16, Recreation and Parks	16-13	235	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
136	Chapter 16, Recreation and Parks	16-15	244	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
137	Chapter 16, Recreation and Parks	16-13	262	*Revise "East Potomac Park" to read "*East and West Potomac Parks."

ID	Chapter	Page #	Line #	FEIS Corrected Text/Clarification
138	Chapter 17, Social and Economic Resources	17-10	220	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
139	Chapter 17, Social and Economic Resources	17-12	300	*Delete sentence reading: "*Washington Marina, located adjacent to the existing tracks and Maine Avenue SW, would permanently lose approximately one-third of the approximately 88 existing spaces." *Replace with following text:* "Washington Marina, located adjacent to the existing tracks and Maine Avenue SW, has operated a marina at this location since 1951. In addition to private boat slip rentals, the marina rents dock space to three commercial riverboat companies. The marina would permanently lose approximately one-third of the 67 existing spaces in the lot adjacent to the railroad corridor."
140	Chapter 17, Social and Economic Resources	17-12	301	*Add sentence after "approximately 88 parking spaces:"* "In addition to servicing recreational and commercial slip customers, the marina has stated that they lease spaces for monthly parking to nearby office workers. The loss of these spaces would result in a loss of revenue to the marina."
141	Chapter 17, Social and Economic Resources	17-13	307	*Change "East Potomac Park" to* "West Potomac Park."
142	Chapter 17, Social and Economic Resources	17-13	318	*Change "East Potomac Park" to* "West Potomac Park."
143	Chapter 17, Social and Economic Resources	17-14	345	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
144	Chapter 17, Social and Economic Resources	17-16	421	*Change "East Potomac Park" to* "West Potomac Park."
145	Chapter 17, Social and Economic Resources	17-16	422-423	*Revise sentence to read:* "This would include temporary closure of *a portion* of the surface parking at the Washington Marina."
146	Chapter 17, Social and Economic Resources	17-16	433	*Add text after "loss of patrons:"* "Without mitigation, these impacts would constitute a moderate permanent impact to marina operations."

ID	Chapter	Page #	Line #	FEIS Corrected Text/Clarification
147	Chapter 19, Public Health, the Elderly, and Persons with Disabilities	19-7	178	*Add paragraph after line 178:* As it relates to public health, construction noise can increase the risk of noise-induced hearing loss (NIHL) due to long-term exposure to elevated noise. According to Occupational Safety and Health Administration (OSHA), there is an increased risk of NIHL when exposed to a time-weighted average (TWA) noise exposure of 85 A-weighted decibels (dBA) or greater over 8 hours. Long-term noise exposure at these levels can generally only occur for construction equipment operations and other workers on the project site. Above these noise thresholds, OSHA requires an employer to institute a hearing conservation program where they would annually test employees, monitor sound, and require hearing protection or other engineering noise controls. Appropriate noise controls already exist for constructions workers regardless of the specific project they are working on and the general public would not be allowed within the project site. Daytime noise levels could reach 92 dBA at the NAMA headquarters. However, with windows closed, interior noise levels are typically 20-30 dBA less than noise outside. Therefore, noise levels would be well below OSHA noise limits. With open windows, noise levels inside would be 10 dBA quieter than open air noise levels and also below OSHA limits. Therefore, there would be no potential noise effects on public health due to the Action Alternatives.
148	Chapter 20, Environmental Justice	20-11	231	*Change "approximately 2.4 acres in East Potomac Park" to* "approximately 1.9 acres in East and West Potomac Parks."
149	Chapter 20, Environmental Justice	20-12	241	*Change "approximately 0.3 additional acres of East Potomac Park" to* "approximately 0.1 additional acres of West Potomac Park."
150	Chapter 20, Environmental Justice	20-13	300	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
151	Chapter 21, Cumulative Impacts	21-9	190	*Change "four park resources" to* "five park resources."
152	Chapter 21, Cumulative Impacts	21-9	214	*Add bullet:* • **West Potomac Park:** No other past, present, or reasonably foreseeable actions were identified that would result in impacts to West Potomac

ID	Chapter	Page #	Line #	FEIS Corrected Text/Clarification
				Park. Therefore, there would be no cumulative impacts on West Potomac Park.
153	Chapter 21, Cumulative Impacts	21-24	712	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
154	Chapter 21, Cumulative Impacts	21-25	733	*Change "East Potomac Park" to* "West Potomac Park."
155	Chapter 22, Bike-Pedestrian Crossing	22-1	18	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
156	Chapter 22, Bike-Pedestrian Crossing	22-3	88	*Change "East Potomac Park" to* "West Potomac Park."
157	Chapter 22, Bike-Pedestrian Crossing	22-4	108	*Change "East Potomac Park" to* "West Potomac Park."
158	Chapter 22, Bike-Pedestrian Crossing	22-10	258	*Change "East Potomac Park" to* "West Potomac Park."
159	Chapter 22, Bike-Pedestrian Crossing	22-11	292	*Change "East Potomac Park" to* "West Potomac Park."
160	Chapter 22, Bike-Pedestrian Crossing	22-11	298	*Change "East Potomac Park" to* "West Potomac Park."
161	Chapter 22, Bike-Pedestrian Crossing	22-12	322	*Change "East Potomac Park" to* "West Potomac Park."
162	Chapter 22, Bike-Pedestrian Crossing	22-19	549	*Change "East Potomac Park" to* "West Potomac Park."
163	Chapter 22, Bike-Pedestrian Crossing	22-24	648	*Change "East Potomac Park" to* "West Potomac Park."
164	Chapter 22, Bike-Pedestrian Crossing	22-32	953	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
165	Chapter 22, Bike-Pedestrian Crossing	22-33	975	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
166	Chapter 22, Bike-Pedestrian Crossing	22-33	984	*Change "East Potomac Park" to* "West Potomac Park."

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167	Chapter 22, Bike-Pedestrian Crossing	22-38	1177	*Change "East Potomac Park" to* "West Potomac Park."
168	Chapter 22, Bike-Pedestrian Crossing	22-39	Table 22-2	*Change "East Potomac Park" to* "West Potomac Park."
169	Chapter 22, Bike-Pedestrian Crossing	22-39	Table 22-2	*Change "Acres with Action Alternative A" from 2.71 acres to 1.71 acres* *Change "Acres with Action Alternative B" from 2.81 acres to 1.81 acres"*
170	Chapter 22, Bike-Pedestrian Crossing	22-39	1192-1193	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
171	Chapter 22, Bike-Pedestrian Crossing	22-39	1205	*Change "East Potomac Park" to* "West Potomac Park."
172	Chapter 22, Bike-Pedestrian Crossing	22-40	1238-1239	*Change "East Potomac Park" to* "West Potomac Park."
173	Chapter 22, Bike-Pedestrian Crossing	22-43	1322	*Change "East Potomac Park" to* "West Potomac Park."
174	Chapter 22, Bike-Pedestrian Crossing	22-43	1332	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
175	Chapter 22, Bike-Pedestrian Crossing	22-43	1334	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
176	Chapter 22, Bike-Pedestrian Crossing	22-43	1338	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
177	Chapter 22, Bike-Pedestrian Crossing	22-43	1352	*Change "East Potomac Park" to* "West Potomac Park."
178	Chapter 22, Bike-Pedestrian Crossing	22-44	1366	*Change "East Potomac Park" to* "West Potomac Park."
179	Chapter 22, Bike-Pedestrian Crossing	22-44	1389	*Change "East Potomac Park" to* "West Potomac Park."
180	Chapter 22, Bike-Pedestrian Crossing	22-46	1458-1459	*Change "East Potomac Park" to* "West Potomac Park."
181	Chapter 22, Bike-Pedestrian Crossing	22-49	1499	*Change "East Potomac Park" to* "West Potomac Park."

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182	Chapter 22, Bike-Pedestrian Crossing	22-49	1510	*Change "East Potomac Park" to* "West Potomac Park."
183	Chapter 22, Bike-Pedestrian Crossing	22-49	1527	*Change "East Potomac Park" to* "West Potomac Park."
184	Chapter 22, Bike-Pedestrian Crossing	22-49	1538	*Change "East Potomac Park" to* "West Potomac Park."
185	Chapter 22, Bike-Pedestrian Crossing	22-50	1566	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
186	Chapter 22, Bike-Pedestrian Crossing	22-50	1568-1569	*Change "East Potomac Park" to* "West Potomac Park."
187	Chapter 22, Bike-Pedestrian Crossing	22-51	1580	*Change "East Potomac Park" to* "West Potomac Park."
188	Chapter 22, Bike-Pedestrian Crossing	22-56	1760	*Revise "East Potomac Park" to read "*East and West Potomac Parks."
189	Appendix B4, Structures Study Report, Table of Contents	ii	n/a	*The text states that 7.1, Bike-Pedestrian Crossing and 7.2, Future Electrification on Bridge can be found on Page 28.* *Revise to state that sections can be found on Page 27.*
190	Appendix B5, Maryland Avenue SW to L'Enfant Interlocking Clearance Assessment	n/a	n/a	*Add **Exhibit B (**see **Figure 1-1)** before Table of Contents.*
191	Appendix D3, Environmental Consequences Report	10-32	n/a	*Revise text reading "This table shows that mitigation would reduce noise …." to* "This table shows that mitigation is estimated to reduce noise …."
192	Appendix E3, Section 106 Assessment of Effects Report	13	n/a	*First bullet, revise "East Potomac Park" to* "East and West Potomac Parks."
193	Appendix E3, Section 106 Assessment of Effects Report	25	Table 4-1	*Line J, change "East Potomac Park" to* "West Potomac Park."

ID	Chapter	Page #	Line #	FEIS Corrected Text/Clarification
194	Appendix E3, Section 106 Assessment of Effects Report	36	Figure 4-9	*Change "East Potomac Park" to* "West Potomac Park."
195	Appendix E3, Section 106 Assessment of Effects Report	47	Table 4-2	*For "East and West Potomac Parks" entry, third line under "Physical Effects," change "East Potomac Park" to* "East and West Potomac Parks."
196	Appendix E3, Section 106 Assessment of Effects Report	47	Table 4-2	*For "East and West Potomac Parks" entry, eighth line under "Physical Effects," change "East Potomac Park" to* "East and West Potomac Parks."
197	Appendix E3, Section 106 Assessment of Effects Report	47	Table 4-2	*For "East and West Potomac Parks" entry, ninth line under "Visual Effects," change "East Potomac Park" to* "East and West Potomac Parks."
198	Appendix E3, Section 106 Assessment of Effects Report	48	Table 4-2	*For "East and West Potomac Parks" entry, first line under "Noise and Vibration," change "East Potomac Park" to* "East and West Potomac Parks."
199	Appendix E3, Section 106 Assessment of Effects Report	60	Table 4-3	*For "East and West Potomac Parks" entry, second line, change "East Potomac Park" to* "East and West Potomac Parks."
200	Appendix E3, Section 106 Assessment of Effects Report	61	Table 4-4	*For "National Mall" entry, second line, change "East Potomac Park" to* "West Potomac Park."
201	Appendix E3, Section 106 Assessment of Effects Report	62	Table 4-4	*For "East and West Potomac Parks" entry, second line, change "East Potomac Park" to* "East and West Potomac Parks."
201	Appendix E3, Section 106 Assessment of Effects Report	62	Table 4-4	*For "East and West Potomac Parks" entry, second to last line, change "the East Potomac Park" to* "East and West Potomac Parks."

Figure 1-1 | Errata Sheet Exhibit A – Revised Temporary Impacts at Washington Marina

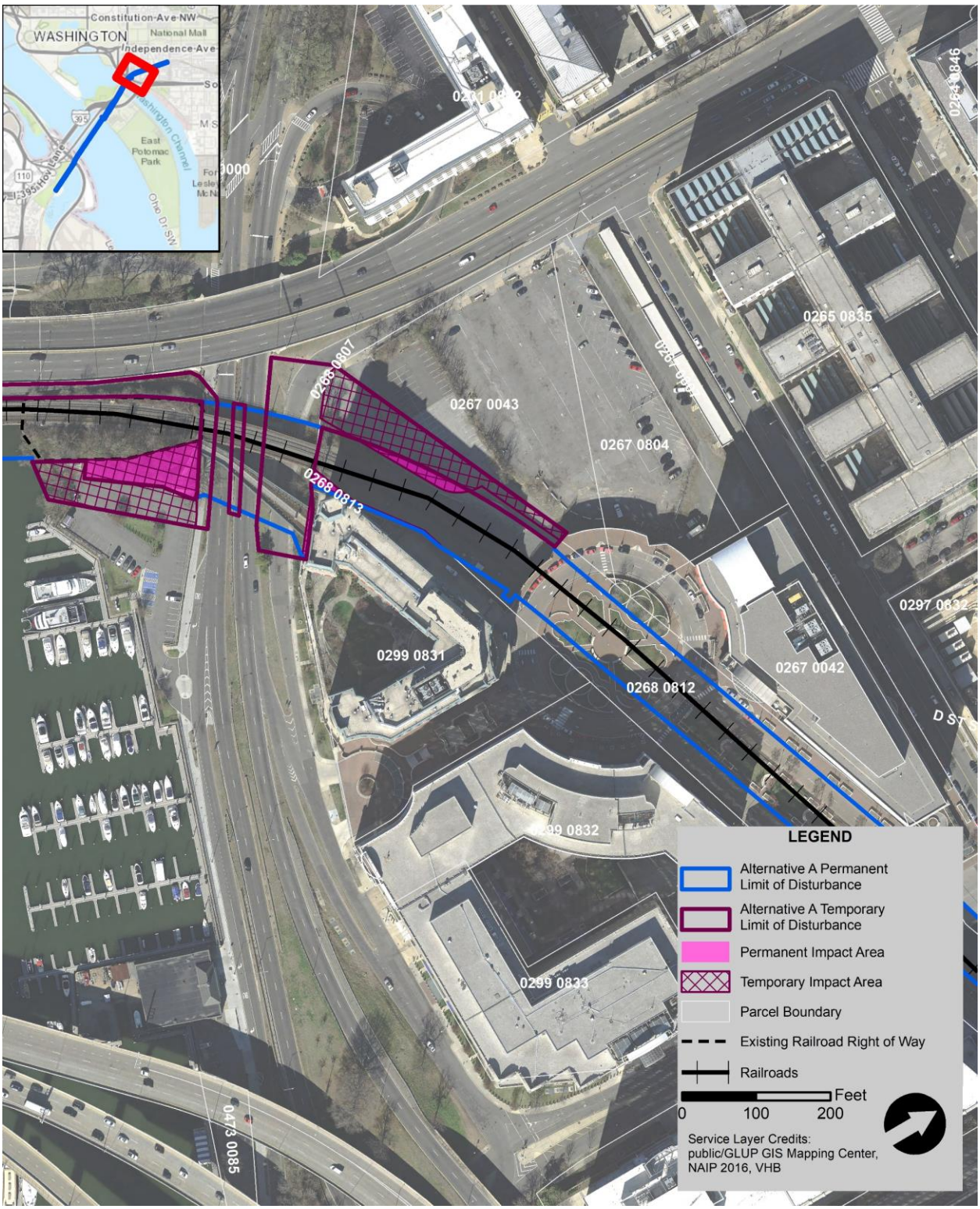


Figure 1-2 | Errata Sheet Exhibit B – Information Sheet for Maryland Avenue SW to L'Enfant Interlocking Clearance Assessment (see DEIS Appendix B5)

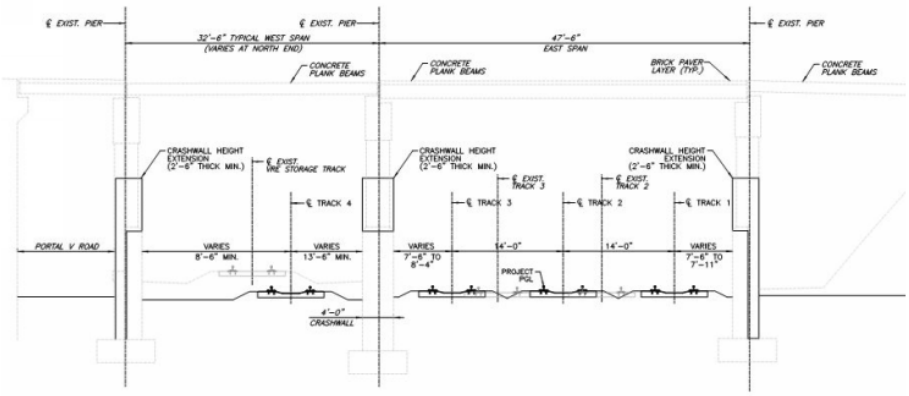
LONG BRIDGE PROJECT

The Federal Railroad Administration (FRA), jointly with the District Department of Transportation (DDOT), is preparing an Environmental Impact Statement (EIS) in accordance with the National Environmental Policy Act (NEPA) for the Long Bridge Project (Project). The Project consists of proposed improvements to the Long Bridge and related railroad infrastructure located between the RO Interlocking near Long Bridge Park in Arlington, Virginia, and the L'Enfant (LE) Interlocking near 10th Street SW in the District (collectively, the Long Bridge Corridor).

Throughout the southern limits of the Long Bridge Corridor, 15 feet track spacing is being proposed with 9 feet or greater lateral clearance to structures to meet minimum design standards as defined by the corridor owner and operator, CSX Transportation (CSXT). Between Maine Avenue SW and L'Enfant Interlocking, several bridges and retaining walls present significant obstacles to meeting these standards and would require extensive structural modifications to the bridges, buildings, and walls with major impacts to local roads, business, and public and private properties.

The purpose of the following report, finalized in September 2018, was to provide an assessment of the existing and proposed horizontal alignment within this segment of the project to determine the feasibility of various four-track alignment options between the north end of Maine Avenue and L'Enfant Interlocking. Of the options assessed, the report recommended proceeding with Option 2, which would have 13-feet track spacing and a minimum of 8.5-feet horizontal clearances. After reviewing the report, CSXT stated that they would be more likely to accept an option with 14-foot track centers and 7.5-foot minimum lateral clearance (see **Figure 1**). Therefore, FRA and DDOT developed conceptual engineering plans for the Action Alternatives with the requested spacing, and these plans were used for the analysis of impacts in the Draft EIS (DEIS). The following report contains the original analysis, and therefore discusses 13-foot track centers with 8.5-foot minimum lateral clearance, rather than the 14-foot track centers and 7.5-foot minimum lateral clearance shown in the conceptual engineering plans and used for analysis in the DEIS.

Figure 1 | Typical Section from Conceptual Engineering Plans



Long Bridge Project

Maryland Avenue SW to L'Enfant Interlocking Clearance Assessment November 2019

Long Bridge Project

Record of Decision

Prepared By:
United States Department of Transportation – Federal Railroad Administration

With Cooperating Agencies:
National Park Service, Federal Transit Administration,
National Capital Planning Commission, United States Army Corps of Engineers – Baltimore District, United States Coast Guard, Virginia Railway Express

Submitted Pursuant To:
National Environmental Policy Act of 1969 (42 USC 4321) and the Council on Environmental Quality Implementing Regulations for NEPA (40 CFR 1500-1508); Federal Railroad Administration Procedures for Considering Environmental Impacts (64 FR 28545); Efficient Environmental Reviews for Project Decisionmaking (23 USC 139); Section 4(f) of the United States Department of Transportation Act of 1966 (49 USC 303); Section 106 of the National Historic Preservation Act of 1966 (36 CFR 800);
the Clean Air Act of 1970 (42 USC 7401); the Clean Water Act of 1972 (33 USC 1251); the Coastal Zone Management Act of 1972 (16 USC 1451); and the Endangered Species Act of 1973 (50 CFR 17).

Paul Nissenbaum
Associate Administrator for Railroad Policy and Development
Federal Railroad Administration

08/12/2020
Date of Approval

Lisa Mendelson-Lelmini, Acting Area Director
Region 1: National Capital Area
National Park Service

08/18/2020
Date of Approval

2.0 Record of Decision

2.1. FRA Decision

The FRA has determined, pursuant to the CEQ's regulations implementing NEPA[8] and the FRA *Procedures for Considering Environmental Impacts*,[9] that the requirements of NEPA have been satisfied for the Long Bridge Project (the Project). This ROD memorializes FRA's reviews and approval of the Preferred Alternative and the bike-pedestrian crossing described in **Section 2.3.8, Selected Alternative** of this ROD and **Section 1.0, Final Environmental Impact Statement (FEIS)**. FRA has also completed its Section 4(f) Determination in accordance with Section 4(f) of the U.S. Department of Transportation Act of 1966 and its implementing regulation.[10] The Section 4(f) Determination is provided in **FEIS Appendix A, Final Section 4(f) Evaluation**.

DDOT, as the recipient of the Transportation Investment Generating Economic Recovery (TIGER) grant funding the NEPA process, served as the joint lead agency with FRA in conducting the environmental review process.

DRPT served as a Cooperating Agency during the DEIS. Because they will serve as the Project Sponsor for final design and construction, DRPT became a joint lead agency during preparation of the FEIS/ROD. As Project Sponsor, DRPT will be responsible for designing and constructing the Project as presented in this ROD. It is anticipated that the Project will become the responsibility of the new Virginia Passenger Rail Authority, which formed on July 1, 2020, once that body has the staff capable of administering the Project. Should there be a change in Project sponsorship, the new Project Sponsor will assume DRPT's responsibilities and commitments as explained in this combined FEIS/ROD.

Cooperating Agencies are listed below. Their actions related to the Project are described in Section 1.4.2 of the DEIS, Cooperating Agencies (see the DEIS online at http://longbridgeproject.com/deis/).

- NPS
- National Capital Planning Commission (NCPC)
- United States Coast Guard (USCG)
- United States Army Corps of Engineers (USACE) – Baltimore District and Norfolk District
- FTA
- Virginia Railway Express (VRE)

FRA is required to identify the environmentally preferable alternative in its ROD.[11] CEQ's "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations" describes the environmentally preferable alternative as "the alternative that will promote the national environmental

[8] 40 CFR 1500-1508
[9] 64 FR 28545 (1999)
[10] 23 CFR 774
[11] 40 CFR 1505.2(b)

policy as expressed in NEPA's Section 101."[12] FRA made its determination by considering each alternative's impacts against the national environmental policy goals listed in Section 101:

- Fulfilling the responsibilities of each generation as trustee of the environment for succeeding generations;
- Assuring for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;
- Attaining the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
- Preserving important historic, cultural and natural aspects of our national heritage and maintaining, wherever possible, an environment that supports diversity and variety of individual choice;
- Achieving a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and
- Enhancing the quality of renewable resources and approaching the maximum attainable recycling of depletable resources.[13]

FRA weighed and balanced the environmental effects associated with the Action Alternatives as well as those associated with the No Action Alternative. Considering these factors, FRA determined that the adverse environmental impacts associated with the Selected Alternative are less substantial than the impacts associated with Action Alternative B and the No Action Alternative. Although the No Action Alternative would have fewer near-term impacts to the physical environment, including historic, cultural, or natural resources, than the Selected Alternative, the Selected Alternative would have substantial beneficial impacts on transportation when compared to the No Action Alternative that outweigh the physical impacts of constructing the Selected Alternative. Action Alternative B would have greater impacts than the Selected Alternative but with similar benefits; therefore, its greater adverse impacts would not be outweighed by its beneficial impacts when compared to the Selected Alternative.

Specifically, the Selected Alternative would provide additional capacity to meet future demand, facilitates continued operations during planned maintenance or unanticipated outages, and facilitates access to existing stations, nodes, freight network, and trains. In doing this, the Selected Alternative would accommodate additional rail service and enable railroad operators to provide an attractive alternative to automobile traffic in the congested I-95 corridor. These benefits promote fulfilling the responsibilities of each generation as trustee of the environment for succeeding generations and achieving a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities by enhancing sustainable travel options.

[12] Council on Environmental Quality, "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations," March 23, 1981, amended 1986 (46 FR 18026). Accessed from https://www.energy.gov/sites/prod/files/2018/06/f53/G-CEQ-40Questions.pdf. Accessed June 4, 2020/.
[13] 42 USC 4331(b).

2.2. NPS Decision

After consultation with FRA, DDOT, and DRPT, review of the FEIS and other NEPA documentation, NPS, in accordance with 43 CFR 46.120, is adopting the Long Bridge Project EIS and stating its intent, when an appropriate legal mechanism is identified for permanent use of the affected Federal park property for the Project, to allow use and occupancy of park lands, including the George Washington Memorial Parkway (GWMP), East Potomac Park, West Potomac Park, and Hancock Park, and allow use of the bed of the Potomac River, including related waterbodies, as described in this ROD. The EIS fulfills the requirements of NEPA and applicable regulations, and meets the policies set forth in NPS Director's Order 12, Conservation Planning, Environmental Impact Analysis and Decision-Making, and the NPS NEPA Handbook.

The Project Sponsor for final design and construction has requested the right and/or permission to use NPS land for the Project and submitted preliminary plans to construct and operate a new railroad bridge over the Potomac River upstream of the existing Long Bridge. The Project includes construction of a new two-track railroad bridge over the GWMP and demolition of the existing railroad bridge over the Washington Channel, to be replaced by a new four-track bridge. In addition, Project mitigation for impacts to properties protected under Section 4(f) includes construction of a new bike-pedestrian crossing. The Project would require NPS to issue a special use permit for the temporary use of land under its administration for construction staging, to issue a riverbed permit, and when an appropriate legal mechanism is identified for permanent use of the affected Federal park property for the Project, to undertake the disposal or exchange of property to transfer sufficient interests in NPS lands to DRPT for the Long Bridge Project. Construction would require temporary staging areas within the GWMP, West Potomac Park, East Potomac Park, Hancock Park, and in the Potomac River and Washington Channel as depicted in the DEIS in **Chapter 3.0, Alternatives**. As part of this decision, the United States will, through a mechanism to be identified after the conclusion of the NEPA process, transfer or dispose of lands, or interests therein, of affected parklands, including in the GWMP (approximately 1.1 acres), East Potomac Park (approximately 0.5 acres), and West Potomac Park (approximately 1.7 acres) for construction and operation of the new railroad bridge over the Potomac River and associated infrastructure, and for construction and operation of the bike-pedestrian crossing.

NPS has prepared and approved a Statement of Findings for Impacts to Wetlands (**Appendix H**) that documents the wetlands that will be temporarily and permanently impacted and describes how those impacts will be mitigated. NPS also concurs with the findings and the mitigation specified in the Programmatic Agreement (PA) executed to conclude the National Historic Preservation Act of 1966 Section 106 consultation process (**Appendix B**). NPS will issue permits to access the required areas consistent with applicable authorities. NPS has executed a Mitigation Agreement with DRPT (**Appendix C**), documenting the terms by which DRPT will provide compensatory mitigation and mitigate certain impacts to and around NPS property from construction and implementation of the Project.

The Project will use land within the GWMP, bed of the Potomac River, East Potomac Park, West Potomac Park, and Hancock Park for the Preferred Alternative and bike-pedestrian crossing as identified in the FEIS (see **Section 1.0, FEIS**). DRPT, in consultation with NPS and FRA, identified and committed to implementing specific minimization and mitigation measures to reduce the impact of the Preferred Alternative on the visual, cultural, natural, and operational aspects of NPS-administered properties. These mitigation measures are outlined in **Section 2.4, Measures to Minimize Harm**. NPS's applicable

approvals for the Project are provided with the understanding that DRPT will implement the commitments contained in this ROD (see **Section 2.4, Measures to Minimize Harm**), the PA (**Appendix B**), the NPS Statement of Findings for Wetlands and Floodplains (**Appendix H**), and the DRPT-NPS Mitigation Agreement (**Appendix C**) that relate to the Project's impacts on NPS-administered properties.

NPS is required to identify the environmentally preferable alternative in its NEPA documents. According to the Department of the Interior (DOI) regulations implementing NEPA (43 CFR 46.30), the environmentally preferable alternative is the alternative "that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources." The environmental impacts of all the alternatives identified in the EIS are summarized in **Table 1-1**. While the Selected Alternative does have benefits described in **Section 2.3, Basis of Decision**, it does not meet the DOI definition of environmentally preferable. The Selected Alternative will introduce a new element into NPS-administered properties that will have short- and long-term impacts to the natural and cultural resources of the GWMP, bed of the Potomac River, and East and West Potomac Parks. NPS's environmentally preferable alternative is the No Action Alternative, which is the only alternative that avoids such impacts.

2.3. Basis of Decision

The documents considered in making this decision include the September 2019 Draft Environmental Impact Statement (available online at http://longbridgeproject.com/deis/), the FEIS (see **Section 1.0, FEIS**), the Final Section 4(f) Evaluation (**FEIS Appendix A**), the Section 106 Programmatic Agreement (PA) (**Appendix B**), the DRPT-NPS Mitigation Agreement (**Appendix C**), agency, operator, and organization comments received on the DEIS (**FEIS Appendix F**), public comments received on the DEIS (**FEIS Appendix G**), the NPS Statement of Findings for Wetlands (**Appendix H**), and the NPS Non-Impairment Determination (**Appendix J**) as well as technical memoranda, correspondence, and other supporting documents.

2.3.1. Planning Process

In 2011, DDOT received a High-Speed Intercity Passenger Rail grant from FRA to complete a two-phase feasibility and planning study of the rehabilitation or replacement of Long Bridge. The Phase I study, completed in 2015, considered concepts to address the deficiencies of the Long Bridge Corridor. The Phase I study did not make recommendations related to specific concepts. Therefore, the concepts identified in the Phase I study were carried over to the Phase II study. Phase II of the Long Bridge Study commenced in Fall 2015 and included development of a long-range service plan based on future demand in the Corridor, further refinement of engineering concepts, and development of draft evaluation criteria to identify and screen concepts carried forward for analysis in the EIS process. The Long Bridge Project, including a new railroad crossing with two tracks and bike-pedestrian access, is included in the 2020 Amendment to Visualize 2045, the Long-Range Transportation Plan for the National Capital Region.

In addition to the plans described above, a series of NCPC plans for the Local Study Area—starting with *Extending the Legacy* and the *Monumental Core Framework Plan* and elaborated in later plans such as the *Federal Elements of the Comprehensive Plan of the National Capital* and the *Southwest Ecodistrict Plan*—have recommended the expansion of the adjacent CSXT right-of-way capacity from two to four

tracks, the reestablishment of Maryland Avenue SW as a grand boulevard, and reconnecting the surrounding street grid.

2.3.2. NEPA Process

In 2016, FRA awarded DDOT a TIGER grant for Phase III of the Long Bridge Project, which includes the NEPA process. The grant funded the development of the EIS, Section 4(f) Evaluation, and ROD, including conceptual and preliminary engineering to support the analysis of alternatives, analysis of environmental impacts, and identification of a Preferred Alternative. See **Table 2-1** below for a timeline of key milestones during the NEPA process.

Table 2-1 | Long Bridge Project NEPA Process Milestones

Date	Milestone
August 26, 2016	FRA and DDOT initiated the NEPA process with publication of the NOI in the *Federal Register*
September 14, 2016	FRA and DDOT held public and agency Scoping meetings
October 14, 2016	Scoping comment period ended
Fall 2016 – Spring 2017	FRA and DDOT screened preliminary concepts
May 16, 2017	FRA and DDOT held public and agency meetings to present results of the Level 1 Concept Screening
Spring 2017 – Winter 2018	FRA and DDOT screened detailed concepts
December 14, 2017	FRA and DDOT held public and agency meetings to present the alternatives for evaluation in the DEIS
Spring 2018 – Summer 2019	FRA and DDOT analyzed impacts of the alternatives
November 29, 2018	FRA and DDOT held public and agency meetings to present the Preferred Alternative
Winter 2019	Cooperating Agencies reviewed the Administrative DEIS and provided comments
Fall 2019	Public review, hearing, and official comment period on the DEIS
Winter 2020	Cooperating Agencies reviewed the Administrative FEIS and ROD
Spring 2020	DRPT named joint-lead agency
Summer 2020	FRA, DDOT, and DRPT published the FEIS and ROD with NPS

FRA and DDOT initiated the formal NEPA process for the Long Bridge Project with publication of the Notice of Intent (NOI) in the *Federal Register* on August 26, 2016. The NOI announced FRA and DDOT's intent to prepare an EIS, provided background information on the Project, presented the draft Purpose and Need Statement, explained the alternatives development process, and provided an initial list of environmental resources to be analyzed. The NOI also announced the Public Scoping Meeting and invited the public and other interested parties to submit early coordination comments through September 26, 2016. FRA subsequently extended the 30-day Scoping period to October 14, 2016, in response to a public request to have 30 days to review the materials presented at the public meeting on September 14, 2016. FRA published an extension notice in the Federal Register on October 11, 2016.

Public and agency coordination are integral aspects of the NEPA process. FRA and DDOT coordinated with Cooperating Agencies that have jurisdiction by law or with other special expertise related to the Project. These agencies included NPS, FTA, NCPC, USCG, USACE, DRPT, and VRE. They also coordinated with Participating Agencies throughout the NOI, scoping, and Interagency Coordination Meetings. FRA

and DDOT conducted regular outreach with the Cooperating and Participating Agencies throughout the Project, notifying them of important events and requesting agency review of key technical documents.

FRA and DDOT provided information to the public early and continued to solicit public feedback throughout the NEPA process. They encouraged an open discussion of Project details and issues and provided opportunities for comments and questions. FRA and DDOT have engaged the public using specific public meetings to present information and solicit comments at Project milestones. These milestones include Scoping on September 14, 2016, alternatives development on December 14, 2017, and selection of the Preferred Alternative on November 29, 2018.

2.3.3. Purpose and Need

The purpose of the Project is to provide additional long-term railroad capacity and to improve the reliability of railroad service through the Long Bridge Corridor. Currently, there is insufficient capacity, resiliency, and redundancy to accommodate the projected demand in future railroad services. The Project is needed to address these issues and to ensure the Long Bridge Corridor continues to serve as a critical link connecting the local, regional, and national transportation network.

2.3.4. Alternatives Considered

The CEQ regulations implementing NEPA require that Federal agencies "use the NEPA process to identify and assess the reasonable alternatives to proposed actions that would avoid or minimize adverse effects of these actions upon the quality of the human environment."[14] The regulations call for an EIS to "rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated."[15]

2.3.5. No Action Alternative

The No Action Alternative represents the conditions that would exist, if the Project is not implemented, in the Project planning year of 2040. The No Action Alternative does not meet the Long Bridge Project's Purpose and Need and serves as comparison against the potential impacts of the Action Alternatives. The No Action Alternative includes the existing multimodal transportation network, plus all proposed transportation projects within 0.25 miles of the existing Long Bridge Corridor planned for completion by 2040. The No Action Alternative also includes the Potomac River Tunnel Project, as that project will run a new tunnel crossing underneath the existing Long Bridge. The projects included in the No Action Alternative all have independent utility from the Long Bridge Project.

[14] 40 CFR 1500.2
[15] 40 CFR 1502.14(a)

2.3.6. Action Alternatives

Two Action Alternatives were considered in the DEIS, Action Alternative A (the Preferred Alternative), and Action Alternative B (**Figures 2-1 and 2-2;** see **DEIS Chapter 3, Alternatives, Figures 3-7 through 3-14** for more detailed figures). Action Alternative A would construct new two-track railroad bridges over the Potomac River and the GWMP between the existing railroad bridge and the Metrorail Bridge. It would expand the Long Bridge Corridor from two to four tracks, including all necessary infrastructure improvements from RO Interlocking in Arlington, Virginia through L'Enfant (LE) Interlocking in the District.[16] This alternative would retain the existing Long Bridge over the Potomac River and the railroad bridge over the GWMP.

At the southern end of the Project, Action Alternative A would add two tracks to the existing Corridor and tie into the four tracks at RO Interlocking proposed by the concurrent DC to Richmond Southeast High Speed Rail (DC2RVA) project. This alternative would construct a new two-track railroad bridge over the GWMP while retaining the existing bridge. The new two-track bridge crossing would continue over the MVT, Potomac River, and Ohio Drive SW. After crossing the Potomac River and Ohio Drive SW, the Corridor would continue through East and West Potomac Parks, crossing over the portal to the Metrorail Yellow Line tunnel with a new two-track bridge. After crossing the Metrorail Portal, Action Alternative A would continue with four tracks across East and West Potomac Parks, the Washington Channel, and Maine Avenue SW. The four tracks would continue underneath Maryland Avenue SW. From Maryland Ave SW, the tracks would travel along the existing Corridor underneath 12th Street SW and the 12th Street Expressway. Near L'Enfant Plaza SW the tracks would tie into the four tracks proposed at LE Interlocking in a separate project by VRE. Throughout the Corridor, Action Alternative A would construct and reconstruct related infrastructure like retaining walls and embankments and regrade and realign the existing tracks as necessary.

Similar to Action Alternative A, Action Alternative B would construct a new two-track railroad bridge over the Potomac River and the GWMP between the existing railroad bridge and the Metrorail Bridge. However, Action Alternative B would also replace the existing Long Bridge and the railroad bridge over the GWMP rather than keeping those bridges. In addition to replacing the bridge over the GWMP and Long Bridge, Action Alternative B would expand the Long Bridge Corridor from two to four tracks in the same manner as Action Alternative A.

2.3.1. Bike-Pedestrian Crossing

While a bike-pedestrian crossing is not necessary to meet the Purpose and Need for the Long Bridge Project, FRA and DDOT began considering the potential opportunity to accommodate connections to the pedestrian and bicycle network that follow the trajectory of the Long Bridge Corridor during the pre-NEPA Phase I and II Studies. During the NEPA process, the public submitted comments requesting inclusion of a bike-pedestrian crossing. Exploration of a potential crossing continued throughout the NEPA process for the Project.

[16] An interlocking is a segment of railroad infrastructure comprised of track, turnouts, and signals linked (interlocked) in a way that allows trains to safely move from one track to another, or across tracks, preventing conflicting train movements. Note that the proper name of RO Interlocking is "RO." It is not an acronym.

Figure 2-1 | Corridor View: Action Alternative A

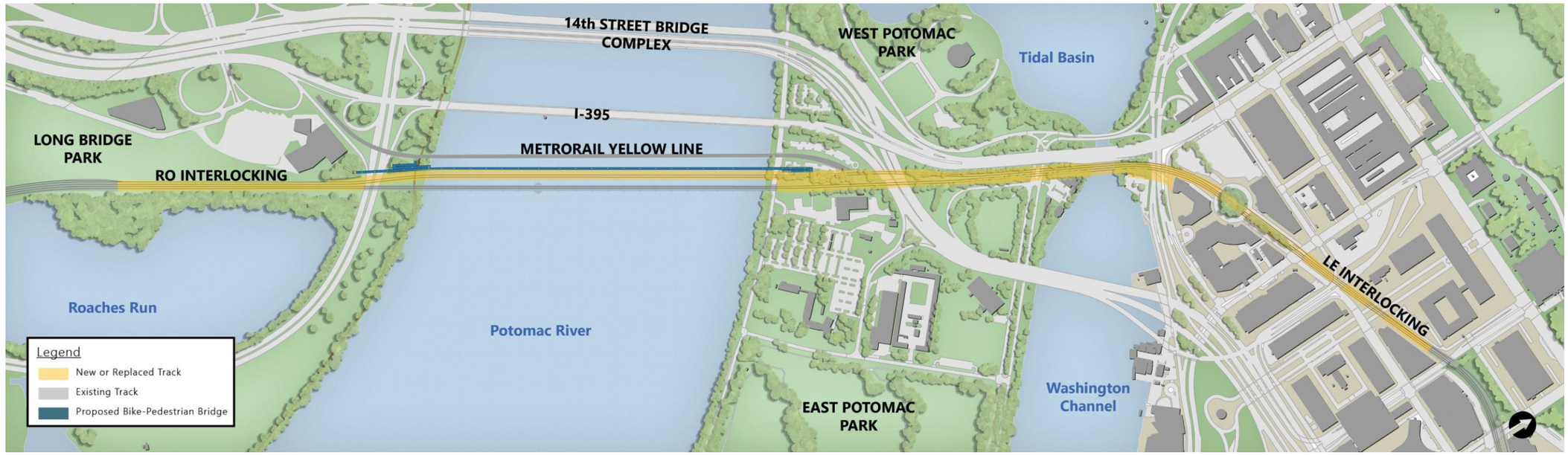
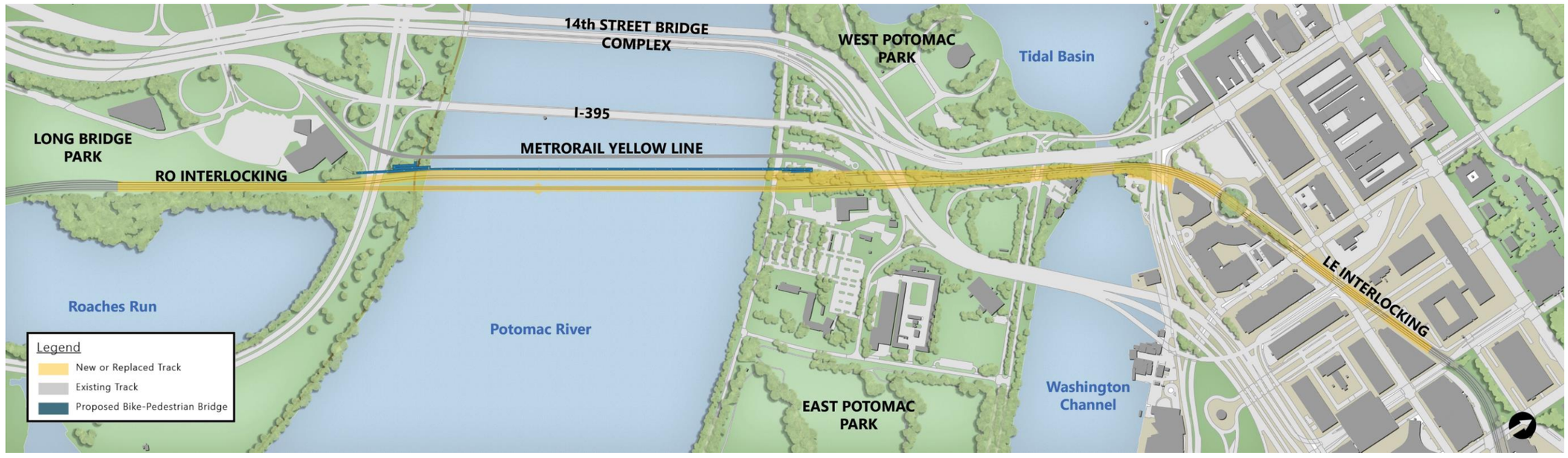


Figure 2-2 | Corridor View: Action Alternative B



FRA and DDOT assessed the feasibility of the bike-pedestrian crossing and considered whether a path could be designed consistent with railroad operator plans and railroad safety practices. NPS, which administers the GWMP, West Potomac Park, and East Potomac Park, agreed that the bike-pedestrian crossing could serve as mitigation for the use of parklands and historic sites protected under Section 4(f). The crossing will provide an important connection between the parks and the regional trail system and therefore has a regional recreational benefit. Therefore, FRA, DDOT, and DRPT have included the bike-pedestrian crossing with the Project as mitigation for impacts to Section 4(f) properties.

The bike-pedestrian crossing will provide a connection between Long Bridge Park in Arlington, Virginia, the MVT, and West Potomac Park in the District, crossing the Potomac River on an independent bridge on the upstream side of the new upstream railroad bridge. The southern end of the bike-pedestrian crossing will connect to a path at the northern end of the Long Bridge Aquatic and Fitness Center and Park Expansion in Long Bridge Park, which is currently under construction and is scheduled for completion in 2021. The bike-pedestrian path will cross over the GWMP, MVT, and the Potomac River on a 2,300-foot-long bridge consisting of prefabricated truss spans. After crossing over the GWMP, the bike-pedestrian crossing will connect to the MVT via a ramp near the shoreline of the Potomac River. The northern end of the bike-pedestrian crossing will connect to Ohio Drive SW in West Potomac Park.

Public comments during the NEPA process also indicated a desire for a bike-pedestrian crossing across West Potomac Park into the District. However, the area between Ohio Drive SW and the Southwest neighborhood following the trajectory of the Long Bridge Corridor is constrained and directly extending the connection would be infeasible. Bicycle and pedestrian connections from East or West Potomac Park into the District could be considered as part of other future projects.

It may be possible to phase construction of the bike-pedestrian bridge so that some of the bridge is constructed concurrently with the railroad bridge, and DRPT will pursue this approach to the extent feasible. However, the EIS analyzed the scenario that would result in a longer duration of impacts, which assumes an additional 2 years of construction following the construction of the railroad bridge due to the space constraints between the new bridges and the Metrorail Bridge. The EIS analysis assumed that construction of the bike-pedestrian crossing would use some of the same construction access and staging areas as the railroad bridge construction.

2.3.2. Selected Alternative

FRA, DDOT, and DRPT selected Action Alternative A for the Project after considering the potential short-term and long-term benefits and impacts, public and agency comments, and costs. In addition, DRPT will construct the bike-pedestrian crossing as mitigation for impacts to Section 4(f) properties. Action Alternatives A and B both support the Purpose and Need and provide the same anticipated benefits, but Action Alternative A has a shorter construction duration, fewer impacts as detailed in the DEIS, the least overall harm to Section 4(f) properties, and a lower capital cost, as detailed in the DEIS. Action Alternative A was identified as the Preferred Alternative in the Draft and Final EIS.

Below is a summary of impacts of the Selected Alternative. See **Table 1-1** for details, DEIS Chapter 3, Alternatives or specific resource sections of the DEIS.[17] The estimated construction duration for the railroad bridge is 5 years, which assumes that construction activities at different locations may be

[17] The DEIS is available at http://longbridgeproject.com/deis/.

occurring at the same time. As noted in **Section 2.3.7, Bike-Pedestrian Crossing**, the analysis of impacts assumes construction of the bike-pedestrian crossing would require an additional 2 years. However, DRPT will pursue concurrent construction of the railroad bridge and the bike-pedestrian crossing to the extent feasible, to minimize overall construction duration.

- **Railroad Infrastructure and Operations:** Increasing tracks from two to four would have a beneficial effect on railroad service, capacity, frequency, safety, and operational flexibility. Construction activities would have a moderate adverse effect on railroad operations as the two additional tracks are built.

- **Roadway Network:** Construction activities would require traffic control measures, temporary lane closures, and temporary lane shifts on heavily used roads such as the GWMP, I-395, and Maine Avenue SW, resulting in an adverse impact to traffic operations.

- **Land Use and Property:** Most of the property impacts would affect local or Federal park properties. Conversion of existing land uses to railroad use in small areas of Crystal City, Long Bridge Park, West Potomac Park, East Potomac Park, and at the property leased by the Washington Marina would cause minor land use impacts. On the GWMP, the conversion of some landscaped areas to railroad use would reduce vegetated screening of transportation infrastructure. The increased frequency of trains traveling near Long Bridge Park, the Mandarin Oriental Hotel, and the Portals V residential building would result in increased noise. The conversion of property to railroad use would affect several private properties, but would not cause displacement. Construction of the bike-pedestrian crossing would cause minor additional impacts to parkland in Long Bridge Park, the GWMP, and West Potomac Park, however would not affect any private property.

- **Water Resources:** Impervious areas would slightly increase within the Potomac River and Roaches Run watersheds, which could cause impacts to water quality without proper mitigation. Impervious areas would slightly decrease within the District Municipal Separate Storm Sewer System (MS4) watershed due to replacement of existing impervious area with rail ballast. Adverse impacts would be minor given the anticipated pollutant load from the area relative to the volume of the receiving surface water body. A portion of the impervious areas would cause a permanent impact to RPAs through increased pollutant loading to waterbodies and loss of vegetation underneath bridge areas. Construction of the bike-pedestrian crossing would add to the increase in impervious surface and loss of vegetation within RPAs.

  Placing bridge piers in the Potomac River and Washington Channel would permanently impact 0.5 acre of waters of the United States. Construction staging and methods would temporarily impact an additional 1.1 acres. While none of these impacts would occur to wetlands regulated under Section 404 of the Clean Water Act, approximately 0.26 acre of permanent impact and approximately 0.83 acre of temporary impact would occur in areas of the Potomac River with a water depth below 2.5 meters, meaning that these waters are classified as riverine wetlands and are therefore addressed in the NPS Statement of Findings. NPS has jurisdiction over the bottom of the Potomac River, and therefore a riverbed permit would be required from NPS.

- **Noise and Vibration:** Noise levels would increase with increased train operations. The increase in noise levels would exceed FTA severe noise criteria at the Portals V Residences, the Mandarin Oriental Hotel, and parts of Long Bridge Park. In addition, the increase in noise levels would exceed FTA moderate noise criteria in other parts of Long Bridge Park. Construction activities also have the potential to increase noise in the Long Bridge Corridor, exceeding the District daytime noise limits at three locations and exceeding the District and Arlington County nighttime noise limits at several other locations.

  The Selected Alternative would not cause any permanent vibration impacts as vibration levels would not exceed FTA vibration criteria. It would also not cause any construction vibration impact. However, there is the potential for construction vibration to reach 0.9 inches per second (107 VdB) at the seawall surrounding East and West Potomac Parks due to pile driving at approximately 20 feet. As the sensitivity of the seawall to vibration is not known at this time, the portion of the seawall within 125 feet of construction activities will be included in the Noise and Vibration Control Plan.

- **Aesthetics and Visual Resources:** The most substantial visual impact is the addition of the railroad bridges over the GWMP and the Potomac River and the removal of mature trees, some of which were planted to screen the railroad corridor from view. Construction activities would disrupt the visual experience from multiple viewsheds along the GWMP and MVT and from the Potomac River and East and West Potomac Parks. Construction of the new railroad bridges and the bike-pedestrian crossing would result in less space available to replant trees to screen the new infrastructure from view, and would also increase the tunnel-like effect of multiple bridge crossings for users on the GWMP, MVT, and Ohio Drive SW.

- **Cultural Resources:** The introduction of a new railroad bridge structure would alter views from the four historic districts within the area of potential effect (GWMP, MVMH, East and West Potomac Parks, and National Mall Historic Districts). It would also result in the removal or alteration of mature trees that were part of the original planting plan for the GWMP and the removal of Japanese cherry trees in East and West Potomac Parks. Construction of the new railroad bridges and the bike-pedestrian crossing would result in less space available to replant trees and vegetation.

- **Parks and Recreation:** The Selected Alternative would directly impact park users by converting approximately 2.5 acres of parkland to railroad use, as well as indirectly impacting park and recreation resources through increased noise from additional passing trains and removal of vegetation. Affected parks include Long Bridge Park, the George Washington Memorial Parkway, East Potomac Park, and West Potomac Park. Construction staging and access would impact portions of the local and Federal parks named above as well as Hancock Park, including visual impacts, use of parkland, and temporary relocation of important elements like the MVT. Construction of the bike-pedestrian crossing would directly impact an additional 1.04 acres of parkland.

2.4. Measures to Minimize Harm

The following commitments to provide mitigation for the Long Bridge Project are the result of agency consultations, comments on the DEIS, and regulatory requirements and reflect the practicable means to minimize environmental harm from the Selected Alternative. Each commitment has been agreed to by DRPT as the responsible party, and would be implemented, as appropriate, during design, construction, and/or following construction. Actual dates for future Project design and implementation will be informed by agreements between DRPT and Federal agencies and are dependent upon identifying and securing funding, completing Project design, finalizing all necessary approvals and permits, including agreements with NPS and CSXT, and completing the NCPC and Commission of Fine Arts review processes for all affected Federal and District properties.

In the event that the Project is turned over from DRPT to another sponsor in the design or construction phase, DRPT will notify FRA and DDOT. As noted in **Section 2.1, FRA Decision**, it is anticipated that the Project will become the responsibility of the new Virginia Passenger Rail Authority. In such an event, DRPT will assist in transition to the new sponsor to ensure fulfillment of any outstanding mitigation measures.

Table 2-2 | Project Commitments

Commitment/ Mitigation ID and Reference	Resource Impact	Commitment or Mitigation Measure	Timing of Action	Responsible Party
A. Continued Coordination				
A01 DEIS 5.6.1.5 DEIS 5.6.2	Aquatic Biota Rare, Threatened, and Endangered Species	Continue coordination with National Marine Fisheries Service to determine whether time-of-year restrictions are required on in-stream construction work during specific periods when migratory fish species are most likely to be present in the Project Area or whether other avoidance and minimization measures may preclude the need for time-of-year restrictions.	Preliminary Engineering	DRPT
A02	Water Resources	Continue coordination with DC Water during final design to ensure the Project avoids or minimizes impacts to existing and planned water infrastructure. Should utility relocation be necessary, DRPT would be responsible for the cost and would coordinate with DC Water to determine the appropriate entity to manage the work.	Final Design/ Construction	DRPT
A03	Water Resources	Coordinate with DC Water during final design and construction to ensure they have access to DC Water assets during and after construction.	Final Design/ Construction	DRPT
A04 DEIS 9.6.1	Railroad Infrastructure and Operations	Continue coordination with CSXT to develop construction staging and phasing to minimize impacts to railroad operations. To the extent that impacts are unavoidable, DRPT would work with CSXT to determine appropriate mitigation.	Preliminary Engineering	DRPT
A05	Railroad Infrastructure and Operations	Continue coordination with CSXT to develop agreements related to operation and maintenance of the new tracks, and to resolve any additional issues that may arise, including appropriate compensation for use of the railroad right-of-way.	Before Construction	DRPT

Commitment/ Mitigation ID and Reference	Resource Impact	Commitment or Mitigation Measure	Timing of Action	Responsible Party
A06	Railroad Infrastructure and Operations	Continue coordination with operators including CSXT, Amtrak, and VRE to optimize design from the perspective of railroad operations to the extent practicable.	Preliminary Engineering	DRPT
A07 DEIS 9.6.2.2	Washington Metropolitan Area Transit Authority (WMATA) Metrorail Service	Continue coordination with WMATA to align activities requiring interruptions in service with any planned Metrorail Yellow Line work also requiring interruptions, to the extent practicable.	Final Design & Construction	DRPT
A08 DEIS 9.6.2.3	Local and Commuter Bus Service	Coordinate with transit operators to enable adjustments as necessary to minimize impacts to bus routes.	Final Design & Construction	DRPT
A09 DEIS 9.6.4 DEIS 12.6.1	Roadway Network Land Use	Continue coordination with Virginia Department of Transportation (VDOT), Arlington County, DDOT, and NPS on development of a Project-wide Traffic Management Plan (see **Measure B32**).	Final Design	DRPT
A10 DEIS 9.6.5 DEIS 17.6.2	Parking Property Social and Economic Resources	Coordinate with the District of Columbia (lessor of Washington Marina occupied land) and the Washington Marina company owner (lessee of the Washington Marina occupied land) to determine appropriate mitigation for Washington Marina leased acreage where parking lot is located to determine temporary and permanent impact mitigation, in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.	Preliminary Engineering	DRPT
A11 DEIS 9.6.7	Navigation	Coordinate with USCG to minimize disruptions to maritime traffic during construction.	Final Design & Construction	DRPT

Commitment/ Mitigation ID and Reference	Resource Impact	Commitment or Mitigation Measure	Timing of Action	Responsible Party
A12 DEIS 12.6.2	Property	Coordinate with NPS to identify appropriate mechanism through which to obtain sufficient rights in or jurisdiction over NPS-administered properties. If a land exchange is required, identify appropriate properties for the exchange.	EIS Phase	DRPT (lead) with NPS (support)
A13 DEIS 12.6.2	Property	Coordinate with the NPS regarding issuance of any permits that may be necessary, including for geotechnical work, research, construction access, and use of the bed of the Potomac River	Preliminary Engineering	DRPT
A14 DEIS 12.6.2	Property	Establish agreements with private property owners and building tenants to provide construction access in a manner that minimizes adverse impacts to business activities and other land uses. Coordinate with property owners to address specific access requirements and minimize disruptions, wherever possible.	Preliminary Engineering	DRPT
A15 DEIS 12.6.3	Consistency with Local and Federal Plans	Where the Project may be inconsistent, or potentially in conflict with, local plans, coordinate with the Arlington Department of Community Planning, Housing and Development; District of Columbia Office of Planning; NCPC; and NPS on strategies to minimize adverse impacts on these plans and to avoid or minimize potential conflicts with the implementation of local plans.	Preliminary Engineering	DRPT
A16 DEIS 13.6.1	Noise	Coordinate with CSXT, Amtrak, and VRE, as well as any potential future users (such as MARC or Norfolk Southern) to identify risk allocations due to any increased noise that may occur to nearby structures.	Preliminary Engineering	DRPT

Commitment/ Mitigation ID and Reference	Resource Impact	Commitment or Mitigation Measure	Timing of Action	Responsible Party
A17 DEIS 14.6 PA III(B)(1)	Aesthetics and Visual Resources	Provide for design review by DC SHPO, VDHR, NPS, NCPC and CFA as stipulated in Programmatic Agreement Stipulation III(B)(1), Design Review and Measures C01 and C02).	Preliminary Engineering	DRPT (lead) with FRA, DC SHPO, VDHR, NPS, NCPC, and CFA (support)
A18 DEIS 14.6	Aesthetics and Visual Resources	Coordinate with NPS on design of signage on NPS property for construction, traffic control, and relocation of the Mount Vernon Trail.	Preliminary Engineering	DRPT
A19 DEIS 16.6	Recreation and Parks	Coordinate with park owners, including Arlington County and NPS, on traffic control strategies to minimize traffic disruptions and maintain vehicular, pedestrian, and bicycle mobility on roadways during construction.	Final Design & Construction	DRPT
A20	Recreation and Parks	Coordinate with park owners, including Arlington County and NPS, to develop details to be included in construction contract regarding access and use of parkland during construction.	Preliminary Engineering	DRPT
A21 DEIS 18.6.1 DEIS 18.6.3	Railroad Safety Public Safety	Coordinate with Federal, state, and local law enforcement and safety agencies to ensure access and minimize delays for emergency response during construction.	Final Design & Construction	DRPT
A22 DEIS 18.6.1	Railroad Safety	Coordinate with CSXT, Amtrak, and VRE to identify and mitigate operational impacts of the reduced track spacing and lateral clearance between Maine Avenue SW and LE Interlocking.	Preliminary Engineering	DRPT
A23 DEIS 18.6.3	Security	Coordinate with CSXT and Federal, state, and local law enforcement to implement measures to inhibit trespassing, incursions, and potential terrorist acts on railroad infrastructure.	Preliminary Engineering & Final Design	DRPT

Commitment/ Mitigation ID and Reference	Resource Impact	Commitment or Mitigation Measure	Timing of Action	Responsible Party
B. Environmental Protection				
B01 DEIS 5.6.1.1	Terrestrial Vegetation	Adjust temporary access and staging areas to avoid trees and vegetation during refinement of the disturbance limits to ensure that vehicles and materials are only stored on vegetated surfaces when absolutely necessary.	Preliminary Engineering	DRPT
B02 DEIS 5.6.1.1 DEIS 14.6 DEIS 15.6 DEIS 16.6	Terrestrial Vegetation Aesthetics and Visual Resources Cultural Resources (see C03) Recreation and Parks	Develop a vegetation protection plan for areas within the limits of disturbance prior to construction.	Preliminary Engineering	DRPT
B03 DEIS 5.6.1.1 DEIS 14.6 DEIS 15.6 DEIS 16.6	Terrestrial Vegetation Aesthetics and Visual Resources Cultural Resources (see C03) Recreation and Parks	Require contractor to employ tree and vegetation protection measures and measures to prevent or limit equipment access to adjacent forested areas through protective fencing. Protect both forest areas and individual trees within construction staging and access areas prior to construction under the supervision of a licensed arborist or other qualified professional. Arborist to also perform any necessary pruning in ways that maximize tree survival both during and following bridge construction.	Construction	DRPT
B04 DEIS 5.6.1.1	Terrestrial Vegetation	Require contractor to wash all equipment prior to entering NPS lands to be free of all and any debris, to minimize the spread or introduction of invasive species.	Construction	DRPT

Commitment/ Mitigation ID and Reference	Resource Impact	Commitment or Mitigation Measure	Timing of Action	Responsible Party
B05 DEIS 5.6.1.1	Terrestrial Vegetation	Require that all introduced organic material such as soil, mulch, and seed be certified weed seed free, to minimize the spread or introduction of invasive species.	Construction	DRPT
B06 DEIS 5.6.1.1	Terrestrial Vegetation	Require contractor to install fencing, mulch, and planking to reduce injury and compaction when vegetated surfaces are the only option for staging near the Project.	Construction	DRPT
B07 DEIS 5.6.1.1 DEIS 14.6 DEIS 15.6 DEIS 16.6	Terrestrial Vegetation Aesthetics and Visual Resources Cultural Resources (see C04, C05, C07, and C08) Recreation and Parks	Reestablish terrestrial vegetation removed for both permanent and temporary construction activities where possible and in coordination with any reforestation requirements. Maintain trees and vegetation for 3-5 years following planting. See Commitments C07 and C08 for specific requirements related to NPS-administered historic properties.	After Construction	DRPT and NPS
B08 DEIS 5.6.1.1 DEIS 14.6 DEIS 15.6 DEIS 16.6	Terrestrial Vegetation Aesthetics and Visual Resources Cultural Resources (see C04, C05, C07, and C08) Recreation and Parks	Restore areas to their pre-construction function and appearance, either through reseeding or replanting of woody vegetation using native species. Maintain trees and vegetation for 3-5 years following planting. See Commitments C07 and C08 for specific requirements related to NPS-administered historic properties.	After Construction	DRPT and NPS

Commitment/ Mitigation ID and Reference	Resource Impact	Commitment or Mitigation Measure	Timing of Action	Responsible Party
B09 DEIS 5.6.1.2	Wetland Vegetation Submerged Aquatic Vegetation Wildlife	Employ erosion control and stormwater management measures during construction to reduce disturbance from erosive forces and sedimentation.	Construction	DRPT
B10 DEIS 5.6.1.3	Submerged Aquatic Vegetation	Require contractor to use silt curtains to keep suspended sediments from leaving construction area.	Construction	DRPT
B11 DEIS 5.6.1.3	Submerged Aquatic Vegetation	Require contractor to avoid boat traffic within shallow water areas where SAV could be damaged by motor board propellers.	Construction	DRPT
B12 Statement of Findings	Submerged Aquatic Vegetation Aquatic Biota	For permanent impacts to SAV and open water habitat, implement appropriate mitigation strategies in coordination with NPS and other regulatory agencies. Potential strategies include transplanting, re-establishment of vegetation in the impact zone, in-kind mitigation at an agreed-upon ratio, or credits.	Final Design	DRPT
B13 DEIS 5.6.1.4	Wildlife	Require contractor to plan construction activities to minimize unnecessary disturbance of wildlife habitat.	Construction	DRPT
B14 DEIS 5.6.1.4	Wildlife	Conduct a survey for nesting birds prior to starting construction of any part of the Project.	Final Design	DRPT
B15 DEIS 5.6.1.5	Aquatic Biota	Conduct a survey to gather additional data on benthic macroinvertebrates.	Final Design	DRPT
B16 DEIS 5.6.1.5	Aquatic Biota	Require contractor to avoid dredging to extent practicable.	Construction	DRPT

Commitment/ Mitigation ID and Reference	Resource Impact	Commitment or Mitigation Measure	Timing of Action	Responsible Party
B17 DEIS 5.6.1.5 DEIS 5.6.2 DEIS 6.6.2	Aquatic Biota; Rare, Threatened, and Endangered Species; Wetlands and Waters of the U.S.	Require contractor to perform work behind cofferdams to reduce turbidity.	Construction	DRPT
B18 DEIS 5.6.1.5 DEIS 5.6.2 DEIS 6.6.2	Aquatic Biota; Rare, Threatened, and Endangered Species; Wetlands and Waters of the U.S.	Require contractor to make use of turbidity curtains around all in-water pile driving operations and potentially during installation of the cofferdam sheet piles if sediment releases appear to be more than minimal.	Construction	DRPT
B19 DEIS 5.6.1.5 DEIS 5.6.2	Aquatic Biota; Rare, Threatened, and Endangered Species	Require contractor to use noise attenuating tools to reduce noise below injury or behavioral modification thresholds for fish if installation of piles requires an impact hammer.	Construction	DRPT
B20 DEIS 5.6.1.5	Aquatic Biota	Require contractor to make several light taps at the start of pile driving to warn fish to leave the area before heavier pile driving begins.	Construction	DRPT
B21 DEIS 5.6.1.5	Aquatic Biota	During installation of cofferdams, require contractor to net and relocate fish as the space within the cofferdam gets down to the last 3 to 4 feet of water.	Construction	DRPT
B22 DEIS 5.6.2 DEIS 6.6.2	Rare, Threatened, and Endangered Species; Wetlands and Waters of the U.S.	Require contractor to use vibratory hammer to extent practicable to install sheet piles for cofferdams to minimize disturbance to bottom sediments.	Construction	DRPT

Commitment/ Mitigation ID and Reference	Resource Impact	Commitment or Mitigation Measure	Timing of Action	Responsible Party
B23 DEIS 6.6.1	Water Quality	Implement stormwater best management practices (BMPs) to decrease runoff volume and peak flow rate and provide prescribed treatment volume and recharge volume.	Construction	DRPT
B24 DEIS 6.6.1 DEIS 6.6.2 DEIS 6.6.4 DEIS 7.6.2	Water Quality; Wetlands and Waters of the U.S.; Chesapeake Bay Preservation Areas Soils	Require contractor to implement erosion and sediment controls in accordance with EPA's 2017 National Pollution Discharge Elimination System (NPDES) Construction General Permit, 2018 Virginia Pollution Discharge Elimination System (VPDES) Storm Water General Permit, District Department of Energy and Environment (DOEE), NPS, and Arlington County requirements.	Construction	DRPT
B25 DEIS 6.6.1	Water Quality	Require contractor to store, handle, and dispose of materials in a manner that prevents exposure of the products to precipitation and/or stormwater.	Construction	DRPT
B26 DEIS 6.6.1	Water Quality	Require contractor to perform on-site treatment of pumped groundwater in accordance with DOEE, DC Water, and Virginia Department of Environmental Quality (VDEQ) requirements for treatment and metering of pumped groundwater.	Construction	DRPT
B27 DEIS 6.6.1	Water Quality	Require contractor to discharge treated pumped groundwater directly to surface waters to minimize temporary Municipal Separate Stormwater Sewer System (MS4) infrastructure capacity and sedimentation impacts during construction.	Construction	DRPT
B28 Statement of Findings	Wetlands	Provide funds based on an agreed upon amount for the compensatory mitigation for impacts to riverine wetlands in the Potomac River at a 10:1 mitigation ratio aimed at improving the overall functionality and values of nearby wetlands through removal of invasive species. Invasive species management to be conducted	Construction	DRPT (lead)_ with NPS (support)

Commitment/ Mitigation ID and Reference	Resource Impact	Commitment or Mitigation Measure	Timing of Action	Responsible Party
		annually by NPS for the duration of construction. The 1.1 acres of total temporary and permanent impact will be compensated at Kenilworth Park & Aquatic Gardens.		
B29 DEIS 6.6.3	Flood Hazards and Floodplain Management	Require contractor to establish staging yards landward of the 100-year floodplain to the extent practicable.	Construction	DRPT
B30 DEIS 6.6.3	Flood Hazards and Floodplain Management	Require contractor to adhere to a plan of action in the event of an oncoming flood event.	Construction	DRPT
B31 DEIS 6.6.3	Flood Hazards and Floodplain Management	Restore temporarily disturbed areas within the floodplain to pre-existing or better conditions.	Construction	DRPT
B32 DEIS 7.6.2	Soils	Require contractor to employ soil stabilization blankets, silt fences, rock check dams, and other best management practices designed to control soil loss during and following construction to minimize erosion of soil resources.	Construction	DRPT
B33 DEIS 22.2.4.3	Soils Hazardous Materials	Require contractor to develop a Soil Management Plan based on results of subsurface investigations dictating appropriate soil handling procedures and identifying appropriate receiving facilities.	Construction	DRPT
B34 DEIS 22.2.4.3	Hazardous Materials	Require contractor to develop a Health and Safety Plan that provides the minimum health and safety specifications contractors must meet during construction, including requirements for environmental monitoring, Personal Protective Equipment (PPE), site control and security, and training. PPE should be selected based on the contaminants of concern and known or suspected hazards.	Construction	DRPT

Commitment/ Mitigation ID and Reference	Resource Impact	Commitment or Mitigation Measure	Timing of Action	Responsible Party
B35 DEIS 22.2.4.3	Hazardous Materials	Require contractor to implement spill response programs that specify procedures for emergency response in the event a spill or leak occurs.	Construction	DRPT
B36 DEIS 9.6.3	Pedestrian and Bicycle Network	Require contractor to construct temporary Mount Vernon Trail and install wayfinding signage, as appropriate, to redirect pedestrian and bicycle traffic during temporary closures due to construction.	Construction	DRPT
B37 DEIS 9.6.3	Pedestrian and Bicycle Network	Require contractor to schedule temporary crossings of the Mount Vernon Trail for materials delivery during evening hours, to the extent practicable, to minimize impacts to trail users. All intermittent closures and traffic control plans would be submitted to NPS for review and approval prior to implementation.	Construction	DRPT
B38 DEIS 9.6.3	Pedestrian and Bicycle Network	Require contractor to install wayfinding signage to direct pedestrians traveling from Maryland Avenue SW to Maine Avenue SW to use alternate routes.	Construction	DRPT
B39	Pedestrian and Bicycle Network	Explore opportunities to refine the design of the bike-pedestrian bridge to accommodate a range of trail users.	Final Design	DRPT
B40	Pedestrian and Bicycle Network	Following construction, restore Mount Vernon Trail to existing or better condition.	After Construction	DRPT
B41 DEIS 9.6.4	Roadway Network	Require final designer or contractor to develop, with approval from agencies that have jurisdiction over applicable roadways, a project-wide Traffic Management Plan (TMP) that includes temporary traffic control plans, analysis of traffic operations, and a public outreach campaign.	Final Design/ Construction	DRPT

Commitment/ Mitigation ID and Reference	Resource Impact	Commitment or Mitigation Measure	Timing of Action	Responsible Party
B42 DEIS 9.6.4	Roadway Network	Require contractor to develop maintenance of traffic plans for approval by NPS to ensure continued through and ramp access along the GWMP as the bridges, embankments, and retaining walls are constructed.	Final Design & Construction	DRPT
B43 DEIS 9.6.4	Roadway Network	Require contractor to limit GWMP lane closures to off-peak hours to extent practicable to reduce impact to motorists.	Construction	DRPT
B44 DEIS 9.6.4	Roadway Network	Require contractor to limit crossing of GWMP by construction vehicles to hours to be stipulated in the special use permit.	Construction	DRPT
B45 DEIS 9.6.4	Roadway Network	Require contractor to maintain two lanes of traffic on GWMP at all times during peak daytime hours.	Construction	DRPT
B46 DEIS 9.6.4	Roadway Network	Require contractor to develop maintenance of traffic plan for I-395 that includes strategies for driver diversion and strategies to encourage use of non-motorized modes; identifies and clearly signs potential detour routes; and develops driver-awareness campaigns regarding probable severe congestions for the duration of the construction period.	Construction	DRPT
B47 DEIS 9.6.4	Roadway Network	Require contractor to develop maintenance of traffic plan for Maine Avenue SW that includes strategies for driver diversion and strategies to encourage use of non-motorized modes; identifies and provides clear signs for potential detour routes; and develops driver-awareness campaigns regarding probable severe congestions for the duration of the construction period.	Construction	DRPT
B48 DEIS 10.6	Air Quality	Require contractor to employ best practices to reduce pollutant emissions from construction activity.	Construction	DRPT

Commitment/ Mitigation ID and Reference	Resource Impact	Commitment or Mitigation Measure	Timing of Action	Responsible Party
B49 DEIS 10.6	Air Quality Energy	Prohibit excessive idling of construction equipment engines and enforce District and Virginia anti-idling laws.	Construction	DRPT
B50 DEIS 10.6	Air Quality	Require contractor to implement protective measures around the construction site and demolition work to prevent dust and debris from leaving the site.	Construction	DRPT
B51 DEIS 10.6	Air Quality	Require contractor to use ultra-low sulfur diesel for all off-road construction vehicles.	Construction	DRPT
B52 DEIS 10.6	Air Quality	Require that any non-road diesel equipment rated 50 horsepower or greater meets EPA's Tier 4 emission limits or that the contractor retrofits the equipment with appropriate emission reduction measures.	Construction	DRPT
B53 DEIS 11.6	Energy	Use energy-efficient technologies wherever feasible in the operations of Long Bridge and construction activities to minimize adverse effects to energy resources	Construction/ After Construction	DRPT
B54 DEIS 11.6	Energy	Encourage contractor to use fuel efficient or alternative fuel vehicles to the greatest extent feasible.	Construction	DRPT
B55 DEIS 11.6	Energy	Require contractor to consider solar-powered generators as an alternative to diesel generators wherever feasible.	Construction	DRPT
B56 DEIS 12.6.1	Land Use	Require contractor to use areas already disturbed for construction of other projects, such as the cloverleafs at I-395 and Boundary Channel Drive, to minimize the impacts of construction staging.	Construction	DRPT
B57 DEIS 12.6.1	Land Use	Require contractor to screen construction staging areas as practicable to minimize impacts to adjacent land uses.	Construction	DRPT

Commitment/ Mitigation ID and Reference	Resource Impact	Commitment or Mitigation Measure	Timing of Action	Responsible Party
B58 DEIS 12.6.1	Land Use	Require contractor to restore property adversely impacted by construction activities, to the extent practicable following construction.	After Construction	DRPT
B59 DEIS 12.6.1	Land Use	Require contractor to incorporate vegetative buffers and screening as practicable between new transportation infrastructure and potentially sensitive land uses to minimize adverse impacts on business activities and building tenants.	Construction	DRPT
B60 DEIS 12.6.1 DEIS 16.6	Land Use Recreation and Parks Section 4(f)	Construct a new bike-pedestrian bridge connecting Long Bridge Park, GWMP, and West Potomac Park.	Construction or After Construction	DRPT
B61 DEIS 12.6.1 DEIS 16.6	Land Use Recreation and Parks	Require contractor to maintain visitor access to parkland and trails during construction; all intermittent closures and traffic control plans would be included in the TMP submitted to NPS for review and approval prior to implementation. (See Commitment B41)	Construction	DRPT
B62 DEIS 12.6.2	Property	For privately-owned properties, comply with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and applicable District, Commonwealth of Virginia, and Arlington County laws in any instances where property acquisition or displacement would be necessary to implement the Project. If full property acquisition is required, fairly compensate property owners for the land acquired and, if necessary, provide relocation assistance.	Construction	DRPT
B63 DEIS 12.4	Property	Conduct title search and survey to establish definitive property ownership and any other existing easements or agreements. Carry out additional transactional due	Preliminary Engineering	DRPT

Commitment/ Mitigation ID and Reference	Resource Impact	Commitment or Mitigation Measure	Timing of Action	Responsible Party
		diligence activities as may be required, e.g. environmental site assessments, appraisals, etc.		
B64 DEIS 13.6.1	Noise	Evaluate and potentially implement turnout design that uses a spring-rail frog or moveable-point frog to reduce noise near Long Bridge Park.	Final Design	DRPT
B65 DEIS 13.6.1	Noise	Evaluate and potentially implement a wayside top-of-rail friction modifier system and use of gauge-face lubrication to reduce wheel squeal near the Portals V Residences and at the Mandarin Oriental Hotel.	Final Design	DRPT
B66 DEIS 13.6.3	Noise	Require contractor to prepare a Construction Noise and Vibration Control Plan prior to beginning construction. Plan should include detailed predictions of construction noise, requirements for conducting construction noise monitoring and, if necessary, detailed approaches that would mitigate potential construction-period noise impact.	Final Design & Construction	DRPT
B67 DEIS 13.6.3	Vibration	Require contractor to prepare a Construction Noise and Vibration Control Plan before beginning construction. This plan should include detailed predictions of vibration levels from the proposed construction equipment and detail specific methods to minimize potential vibration effects. The plan should set acceptable vibration limits and address the need to conduct pre-construction crack surveys, install crack detection monitors, and conduct vibration monitoring. It should define a process to alert the contractor of any limit exceedances and take corrective actions.	Construction	DRPT

Commitment/ Mitigation ID and Reference	Resource Impact	Commitment or Mitigation Measure	Timing of Action	Responsible Party
B68 DEIS 13.6.3	Vibration	Include all vibration-sensitive structures and seawalls within 125 feet of construction in the Noise and Vibration Control Plan.	Construction	DRPT
B69 DEIS 14.6	Aesthetics and Visual Resources	Design final landscaping, including planting, plant selection, and berms, in a manner that mitigates visual impacts on the GWMP, MVT, East Potomac Park, and West Potomac Park, and includes NPS as a participant in the design process. NPS and NCPC would approve any plans prior to implementation. This mitigation may take place outside of the limits of disturbance, as identified by NPS.	Preliminary Engineering & Final Design	DRPT (lead) with NPS (support)
B70 DEIS 14.6	Aesthetics and Visual Resources	Require contractor to use aesthetically pleasing construction fencing and barriers to block potentially unattractive views into construction areas. Require contractor to consider use of screening vegetation to minimize visual impacts of construction activities on viewers. Visual screening of construction areas within NPS-administered properties will meet NPS standards.	Construction	DRPT
B71 DEIS 14.6	Aesthetics and Visual Resources	Avoid the use of the GWMP to transport construction equipment to the extent described in the DEIS. Final construction staging and access plans, including the timing and frequency of activities on the GWMP, will be presented to NPS for review and approval prior to proceeding with the work.	Construction	DRPT
B72 DEIS 16.6	Recreation and Parks	Restore affected ballfields following construction.	At end of Construction	DRPT
B73 DEIS 16.6	Recreation and Parks	Compensate NPS at the rate of $8,860 per ballfield per year for recreation revenue lost during construction due to use of the ballfield for staging. To be included as a requirement in the NPS special use permit.	Construction	DRPT

Commitment/ Mitigation ID and Reference	Resource Impact	Commitment or Mitigation Measure	Timing of Action	Responsible Party
B74 DEIS 16.6	Recreation and Parks	Compensate NPS based on the calculated monthly average of revenue for Parking Lot B as $1,301 and Parking Lot C as $1,391 for parking revenue lost during construction due to use of the parking lots for staging. To be included as a requirement in the NPS special use permit.	Construction	DRPT
B75	Recreation and Parks	Repave and reconstruct pavement and related infrastructure temporarily impacted by construction within the GWMP, West Potomac Park, and East Potomac Park (including Parking Lots B and C and Ohio Drive SW). To be included as a requirement in the NPS special use permit.	At end of Construction	DRPT
B76	Recreation and Parks	Channelize construction access within Hancock Park and surround area with fencing with gate access. Require contractor to minimize frequency of access during periods of the day when the park is heavily used, such as at lunchtime.	Construction	DRPT
B77 DEIS 18.6.1	Railroad Safety	Require contractors to ensure railroad safety training has been completed by all workers that would be in the vicinity of the active tracks during construction.	Construction	DRPT
B78 DEIS 18.6.1	Railroad Safety	Require contractors to develop a Safety and Security Plan for review and approval.	Construction	DRPT
B79 DEIS 18.6.1	Railroad Safety	Between Maine Avenue SW and LE Interlocking, implement infrastructure upgrades to the crash walls, as well as provide clearance detectors, security lighting, enhanced security fencing, and track friction modifiers.	Final Design	DRPT
B80 DEIS 18.6.1	Railroad Safety	Between Maine Avenue SW and LE Interlocking, modify crash walls in the reduced clearance areas to meet the design criteria.	Final Design	DRPT

Commitment/ Mitigation ID and Reference	Resource Impact	Commitment or Mitigation Measure	Timing of Action	Responsible Party
B81 DEIS 18.6.1	Railroad Safety	Between Maine Avenue SW and LE Interlocking, add electrical and communication connections to enable the addition of security measures.	Final Design	DRPT
B82 DEIS 18.6.1	Railroad Safety	Between Maine Avenue SW and LE Interlocking, continue to evaluate opportunities for further structural improvements in the overbuild area during final design to potentially increase lateral clearance.	Final Design	DRPT
B83 DEIS 18.6.2	Public Safety	Require contractor to follow standard Occupational Safety and Health Administration construction safety procedures and industry best practices.	Construction	DRPT
B84 DEIS 18.6.2 DEIS 18.6.3	Public Safety Security	Require contractor to employ standard measures to prohibit trespassing in construction areas, such as barriers, fences, or barricades. Entrances and exits to construction sites should be locked and areas should be well lit and equipped with automatic protective lighting systems. Inspect materials as needed.	Construction	DRPT
B85	Construction Impacts	Explore opportunities to minimize impacts from construction of the bike-pedestrian crossing, including options for constructing elements of the bike-pedestrian crossing concurrently with the railroad bridge.	Final Design	DRPT
C. Cultural Resources and Section 106				
C01 DEIS 15.6.2 PA III(B)(1)	Cultural Resources	Design aesthetic treatments of any elements of the Project introduced into NPS-administered properties to be compatible with the character of existing resources and appropriate for the context of Washington, DC's Monumental Core.	Preliminary Engineering	DRPT

Commitment/ Mitigation ID and Reference	Resource Impact	Commitment or Mitigation Measure	Timing of Action	Responsible Party
C02 DEIS 15.6.2 PA III(B)(1)	Cultural Resources	Provide for design review by DC SHPO, VDHR, NPS, NCPC and CFA during Preliminary Engineering to address design elements as stipulated in the Programmatic Agreement Stipulation III(B)(1) and Commitment Measure A17.	Preliminary Engineering	DRPT (lead) with FRA, NPS, DC SHPO, VDHR, NCPC, and CFA
C03 DEIS 15.6.2 PA III(B)(4)	Cultural Resources	Develop and implement a Vegetation Protection Plan in coordination with NPS, within the limits of disturbance, to determine which vegetation is anticipated to be removed, impacted, or protected by the Project, as stipulated in the Programmatic Agreement Stipulation III(B)(4).	Preliminary Engineering through Construction	DRPT (lead) with NPS (support)
C04 DEIS 15.6.2 PA III(B)(5)	Cultural Resources	Contribute a monetary value, agreed upon with NPS, for NPS's implementation of its portion of the Vegetation Restoration Plan, as stipulated in the Programmatic Agreement Stipulation III(B)(5).	Final Design	DRPT
C05 DEIS 15.6.2 PA III(B)(5)	Cultural Resources	Develop a Vegetation Restoration Plan in collaboration with the NPS, to the extent feasible under DRPT's Project schedule, as stipulated in the Programmatic Agreement Stipulation III(B)(5).	Preliminary Engineering	DRPT
C06 DEIS 15.6.2 PA III(B)(5)	Cultural Resources	Collaborate with DRPT to provide agency expert knowledge and any other available, relevant information for the development of the Vegetation Restoration Plan, including baseline documentation and other material to assist in the development of the restoration plan, as stipulated in the Programmatic Agreement Stipulation III(B)(5).	Preliminary Engineering	NPS

Commitment/ Mitigation ID and Reference	Resource Impact	Commitment or Mitigation Measure	Timing of Action	Responsible Party
C07 DEIS 15.6.2 PA III(B)(5)	Cultural Resources	Implement the portion of the Vegetation Restoration Plan within the limits of disturbance, as stipulated in the Programmatic Agreement Stipulation III(B)(5). Perform vegetation monitoring and invasive plant removal within the LOD for five years after the date of construction completion, to ensure and support vegetation restoration within the limits of disturbance.	After Construction	DRPT
C08 DEIS 15.6.2 PA III(B)(5)	Cultural Resources	Implement the portion of the Vegetation Restoration Plan outside the limits of disturbance, as stipulated in the Programmatic Agreement Stipulation III(B)(5).	Construction	NPS
C09 DEIS 15.6.2 PA III(B)(7)	Cultural Resources	Prepare and implement an interpretation plan as stipulated in the Programmatic Agreement Stipulation III(B)(7).	After Construction	DRPT
C10 DEIS 15.6.2 PA III(B)(2)	Cultural Resources	Contribute a monetary value, agreed upon with NPS, for NPS to use to prepare and implement a GWMP Viewshed Protection Plan and Inventory/Assessment, as stipulated in the Programmatic Agreement Stipulation III(B)(2).	Preliminary Engineering	DRPT
C11 DEIS 15.6.2 PA III(B)(2)	Cultural Resources	Produce a GWMP Viewshed Protection Plan and Inventory/Assessment within two years of receipt of funding.	Within two years of receipt of funding	NPS
C12 DEIS 15.6.2 PA III(B)(3)	Cultural Resources	Contribute a monetary value to NPS, agreed upon with NPS, to prepare Cultural Landscape Inventories as stipulated in the Programmatic Agreement Stipulation III(B)(3).	Preliminary Engineering	DRPT
C13 DEIS 15.6.2 PA III(B)(3)	Cultural Resources	Develop and execute Cultural Landscape Inventories for MVMH – north of Alexandria to Columbia Island and East and West Potomac Parks Historic District for the portion from the Golf Course to the railroad	Within 8 months of receipt of funding (draft); within 1 year of receipt of funding (final)	NPS

Commitment/ Mitigation ID and Reference	Resource Impact	Commitment or Mitigation Measure	Timing of Action	Responsible Party
		corridor to include the NPS National Capital Region Headquarters Campus as stipulated in the Programmatic Agreement Stipulation III(B)(3).		
C14 DEIS 15.6.2 PA III(B)(6)	Cultural Resources	Develop Construction Management Control Plan as stipulated in the Programmatic Agreement Stipulation III(B)(6) to minimize temporary construction effects to historic properties from noise and vibration and visual effects. Elements to include are a Noise and Vibration Control Plan (see B66 and B67) and plan for visual screening of construction areas (see B70).	Construction	DRPT
C15 DEIS 15.6.2	Cultural Resources	Locate construction access and staging activities away from areas of high archaeological potential or within sites that are paved or have been previously disturbed.	Preliminary Engineering	DRPT
C16 PA IV	Cultural Resources	Continue identification and evaluation of archaeological historic properties in accordance with 36 CFR § 800.4 and 800.5 and following the findings and recommendations of the Long Bridge Project Phase IA Archaeological Assessment Report.	Final Design	DRPT
D. Design Requirements				
D01 DEIS 5.6.1.3 DEIS 6.6.2	Submerged Aquatic Vegetation Wetlands and Waters of the U.S.	Align new piers with existing piers.	Preliminary Engineering	DRPT
D02 DEIS 6.6.3	Flood Hazards and Floodplain Management	Design piers with an elliptical shape to allow smoother flood flow conveyance underneath the bridge with minimal turbulence and hydraulic force against the pier walls.	Final Design	DRPT

Commitment/ Mitigation ID and Reference	Resource Impact	Commitment or Mitigation Measure	Timing of Action	Responsible Party
D03 DEIS 7.6.1 DEIS 7.6.2	Geology Soils	Make use of retaining walls to reduce footprint and preserve existing floodplain features and minimize disturbance to soil resources to extent practicable.	Final Design	DRPT
D04 DEIS 14.6	Aesthetics and Visual Resources	Refine bridge structure design and materials to mitigate impacts on visual resources and ensure aesthetic compatibility with built, natural, and cultural resources in the surrounding visual environment.	Final Design	DRPT

2.5. Monitoring and Enforcement

As the Project Sponsor for the Long Bridge Project, DRPT is ultimately responsible for monitoring and implementing mitigation measures for design and construction where it is designated as the responsible party. DRPT and its contractors, will be responsible for their compliance assurance of all applicable commitments and regulatory permit conditions that they must fulfill or obtain for the Long Bridge Project and associated mitigation. DRPT will be responsible for overseeing all reporting requirements related to the mitigation and minimization commitments where it is designated as the responsible party in the previous section. **Table 2-3** contains a list of permits that are anticipated to be required for the construction of the Long Bridge Project and associated mitigation.

Table 2-3 | Anticipated Future Necessary Permits or Approvals for the Long Bridge Project and Associated Mitigation

	Type of Permit/Approval	Authority	Applicability, Timing, and Coordination
NPS	Use of Parkland	To be determined	Authorization will be needed to allow the conveyance and/or permanent use of NPS land for the Project
	Special Use Permit	36 CFR Part 5 Section 5.7 and 54 USC 100101	Permit required for use of park land for construction activities, vehicular access, staging, and material laydown areas
	Riverbed Permit	41 FR 34801 (August 1976)	Permit required for activities that may impact the proprietary interests of the United States in the existing bed of the Potomac River within the original boundaries of the District of Columbia, except for that portion of the bed lying within the pierhead line on the District of Columbia side of the river.
	Right-of-Way Permit	54 USC 100902 and 36 CFR Part 14	Permit required if Project necessitates the relocation of certain public utilities and power and communication facilities within or onto NPS lands.
	Permit for Archaeological Investigations	Archaeological Resources Protection Act (ARPA) and/or the Antiquities Act	Permit required prior to any archaeological studies on parkland by non-NPS personnel.
NPS/ DC SHPO/ VDHR	Construction Protection Plan and Unanticipated Discoveries Plan	Section 106 of the National Historic Preservation Act of 1966	Approval required prior to construction
NCPC	Design Approval	National Capital Planning Act of 1952	Design approvals required during preliminary and final design phases

	Type of Permit/Approval	Authority	Applicability, Timing, and Coordination
CFA	Design Approval	Shipstead-Luce Act of 1930	Design approvals required during final design phase
USCG	Bridge Permit	Sections 9 and 10 of the Rivers and Harbors Act of 1899 General Bridge Act of 1946 33 CFR 114	USCG issued a preliminary public notice requesting navigational information from mariners in September 2019. USCG made a Preliminary Navigation Clearance Determination based on the Navigation Study and information from mariners in March 2020. Formal Bridge Permit Application to be submitted at final design phase
DDOT	Public Right-of-Way Permit	23 CFR 710.403	Approval required prior to construction
FAA	Notice of Proposed Construction or Alteration	14 CFR 77	Notice must be filed at least 45 days prior to beginning construction
USACE	Jurisdictional Determination (JD)	Section 404 of the Clean Water Act of 1972 (CWA); Section 10 of the Rivers and Harbors Act of 1899	Preliminary JD issued on 3/19/2019. Finalize prior to Joint Permit Application/Individual Permit issuance
	Section 408 Review	Section 14 of the Rivers and Harbors Act of 1899 33 USC 408	To be initiated during Project final design phase. Must be issued prior to construction
DOEE/VDEQ/ USACE	Joint Permit Application (JPA) of Nationwide Permit #15	Section 404 of the CWA; Section 10 of the Rivers and Harbors Act of 1899	To be initiated during the Project final design phase. Must be issued prior to construction activities that would impact wetlands or waters of the U.S. JPA includes application for a Virginia Water Protection Permit, which serves as Virginia's 401 certification program for Section 404 permits
EPA	National Pollutant Discharge Elimination System (NPDES) Permit	Section 402 of the CWA	Required for construction activities that disturb one acre or more. Requires preparation of a stormwater pollution prevention plan during construction phase (note that EPA issues all NPDES permits for the District of Columbia – in Virginia permits are issued by VDEQ)
DOEE	Water Quality Certification	Section 401 of the CWA	As required under Section 401 of the Federal Clean Water Act, DOEE provides Water Quality Certification for draft NPDES permits.

	Type of Permit/Approval	Authority	Applicability, Timing, and Coordination
DOEE/EPA	Stormwater Pollution Prevention Plan and Notice of Intent		Prior to the start of construction, selected contractor must prepare a Stormwater Pollution Prevention Plan (SWPPP). Plan must address how pollution would be controlled with respect to all construction activities, management of fuel, hazardous materials, daily cleanup procedures, and other housekeeping measure necessary to maintain a clean construction site
VDEQ	Virginia Pollutant Discharge Elimination System (VPDES) Permit General Permit for Discharge from Construction Activities Stormwater Pollution Prevention Plan	Section 402 of the CWA Virginia Stormwater Management Act	Required for construction activities that disturb one or more acres. Requires preparation of a Stormwater Pollution Prevention Plan (SWPPP) during construction phase
	Virginia Water Protection (VWP) Permit	Section 401 of the Clean Water Act (CWA)	Serves as Virginia's 401 certification for Section 404 permits. State law requires VWP permit be obtained before disturbing a wetland or stream by clearing, filling, excavating, draining, or ditching. Application is made through the Joint Permit Application Process for concurrent Federal and state project review
FEMA	Conditional Letter of Map Revisions Based-On Fill (CLOMR-F)	44 CFR 65, Section 65.5	Verifies proposed impacts in the 100-year floodplain do not increase flood elevations by an allowable amount. Initial determination during final design phase with final LOMR after construction based on as built conditions.
	Letter of Map Revision (LOMR-F) Based-On Fill	44 CFR 65, Section 65.5	Verifies proposed impacts in the 100-year floodplain do not increase flood elevations by an allowable amount. Initial determination during final design phase with final LOMR after construction based on as built conditions

2.6. Public Outreach and Opportunities to Comment

Public coordination is an integral aspect of the NEPA process. Decisions about the future of the Long Bridge Corridor affect a range of stakeholders. FRA and DDOT have been committed to an open and transparent process for involving the public. Accordingly, FRA and DDOT provided many opportunities for collaborative and meaningful participation in the Project. The public meetings conducted at key

stages presented Project information and solicited public comments on Project scoping, alternatives considered, and selection of the Preferred Alternative. A public hearing and comment period were held to solicit oral and written comments on the DEIS. FRA and DDOT conducted the following outreach activities throughout the project:

- **Pre-NEPA Outreach:** Conducted prior to the formal NEPA process as part of previous studies. FRA and DDOT introduced the Project to agencies and the public during the Phase I study. Public engagement during Phase I included developing the first version of the Project website and conducting three open-house public meetings on November 13, 2012; June 6, 2013; and December 5, 2013. During Phase II, FRA and DDOT developed additional concepts for analysis in the NEPA phase and held one public open house on February 16, 2016 to update the public on the status and results of the studies.

- **Public Scoping:** The Scoping process for the Project lasted from August 15, 2016, to October 14, 2016 to provide the public and agencies an early opportunity to inform the range of alternatives for consideration in the DEIS. FRA and DDOT held a Public Scoping Meeting for the Project on September 14, 2016.

- **Public Involvement:** FRA and DDOT continued to engage the public through the NEPA process. FRA and DDOT conducted outreach and encouraged feedback through the Project website, comment forms, electronic mailing lists, public comment periods, and public information meetings. Public meetings were held on May 16, 2017 for the Level 1 Concept Screening; December 14, 2017 for the Proposed Alternatives; November 29, 2018 for the selection of the Preferred Alternative.

- **Public Hearing:** FRA and DDOT convened a public hearing to provide the public and agencies opportunity to express their comments on the content of the DEIS for the record on October 22, 2019.

2.7. Determinations and Findings Regarding Other Laws

2.7.1. Section 106 of the National Historic Preservation Act of 1966

FRA completed consultation in accordance with Section 106 of the National Historic Preservation Act of 1966 and its implementing regulation, which requires federal agencies to consider the impacts of their undertakings on historic properties.[18] Section 106 regulations require that FRA identify historic properties listed in or eligible for listing in the National Register of Historic Places (NRHP) within the Project's Area of Potential Effects (APE); assess effects to historic properties; avoid, minimize, or mitigate any adverse effects; and consult with the District's State Historic Preservation Officer (SHPO), as represented by DC SHPO, Virginia's SHPO, as represented by VDHR, and other consulting parties throughout the Section 106 process.

FRA determined, with DC SHPO and VDHR concurrence, that the Project would result in adverse effects on the GWMP, the MVMH, East and West Potomac Parks, and National Mall Historic Districts. The adverse effects result from permanent change in ownership, construction of new railroad infrastructure

[18] 36 CFR 800

within the boundaries of the historic properties, temporary construction access and staging, temporary and permanent visual effects, and/or temporary and permanent vegetation and plantings.

FRA also identified three terrestrial areas of high potential for archaeological resources and one submerged area of moderate potential within the Project's limits of disturbance. The need for further investigations will be determined later using a phased identification approach and in consultation with the appropriate SHPO and Consulting Parties pursuant to the terms of the Programmatic Agreement (PA). Required investigations and evaluations would be conducted during Final Design once precise locations for ground disturbing activities have been identified.

A fully executed Section 106 PA between FRA, DC SHPO, VDHR, NPS, NCPC, and DRPT (the Signatories) containing conditions and stipulations regarding the Project is provided in **Appendix B** of this ROD. The PA is a refinement of the Draft PA that was included in the DEIS.

Refinements to the PA since the DEIS was published are the result of further coordination among the Signatories regarding Project minimization and mitigation commitments related to the affected historic properties and how best to define those in the PA.

2.7.2. Section 4(f) of the U.S. Department of Transportation Act of 1966

Section 4(f) of the United States Department of Transportation Act of 1966 protects publicly owned parks, recreation areas, wildlife and/or waterfowl refuges, and significant historic sites, whether publicly or privately owned.[19] FRA generally relies on the Federal Highway Administration (FHWA) and FTA regulations implementing Section 4(f) at 23 CFR part 774, as well as associated policy guidance.[20] Section 4(f) requirements apply to all transportation projects that require funding or other approvals by the USDOT. As a USDOT agency, FRA must comply with Section 4(f). FRA may not approve a Project using a Section 4(f) resource unless it determines there is no other feasible and prudent alternative and the project incorporates all possible planning to minimize harm, or FRA determines the impact to the resource is *de minimis*.

The Selected Alternative would result in the use of seven Section 4(f) properties (see **FEIS Appendix A, Final Section 4(f) Evaluation**).[21] When there is no feasible and prudent alternative to the use of a Section 4(f) resource, the Project must include all possible planning to minimize harm to the Section 4(f) property.

- **Long Bridge Park** (*de minimis* impact)**:** The Selected Alternative would involve permanent incorporation of approximately 0.04 or 0.14 acres of the northeast corner of the park to accommodate the expansion of the railroad right-of-way.[22] Because this small portion of the park is naturally vegetated with little recreational value and because the Selected Alternative

[19] 49 USC 303 and 23 USC 138

[20] In October 2018, FRA joined the FHWA and FTA Section 4(f) implementing regulations at 23 CFR part 774.

[21] Note that the GWMP, GWMP Historic District, and MVMH Historic District are counted as separate Section 4(f) properties despite having contiguous boundaries within the Study Area. Likewise, West Potomac Park, East Potomac Park and East and West Potomac Parks Historic District are separate Section 4(f) properties, despite West Potomac Park and East Potomac Park being wholly within East and West Potomac Parks Historic District.

[22] The DEIS used publicly available parcel boundaries from Arlington County's GIS database, as well as GIS data from NPS. These two data sources conflicted when it came to the boundaries of Long Bridge Park and the GWMP. This conflict will need to be resolved through property research during later phases of design.

would not preclude future uses of planned recreational features, use of this small portion of the park would not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f); therefore, FRA finds the use qualifies as *de minimis.*

Steps to minimize harm to the park include realigning the track design and modifications to access and staging areas to impact the park as little as practicable. Mitigation would be implemented through the installation of a new bike-pedestrian crossing that would enhance connectivity with the regional trail network. Recreational use of the affected portion of Long Bridge Park is currently limited due to its vegetated character and future plans for recreational use would not be impeded by the Project. These mitigation measures are detailed in the Final Section 4(f) Evaluation (**FEIS Appendix A**).

- **GWMP/GWMP Historic District/MVMH Historic District:**[23] The Selected Alternative would permanently incorporate either approximately 0.4 acres or 0.5 acres of the GWMP depending on the outcome of additional property research. The Selected Alternative would also have adverse effects to the GWMP and MVMH Historic Districts due to this incorporation of part of the Historic Districts, as well as removal of contributing vegetation that dates to the 1932 planting plan and was intended to screen the railroad bridge from motorists.

  The Selected Alternative would occupy multiple sites on GWMP property for construction access and staging, totaling either approximately 3.4 or 3.8 acres. At each location, construction would require clearing shrubs and trees and fencing areas with signage. The Selected Alternative would also require the temporary closure of approximately 600 linear feet of the MVT found on the GWMP property. A detour would be provided during the trail closure.

  In consultation with the NPS (GWMP and Region 1 - National Capital Area), FRA and DDOT made modifications to the locations of construction access and staging areas to reduce impacts to these resources. Minimization would also include development of a construction management plan to minimize temporary construction effects from noise and vibration and visual effects, development of a vegetation protection plan to preserve existing trees and vegetation to the extent possible, a detour for the temporary closure of a portion of the MVT, and implementation of a design review process to minimize impacts to the Historic Districts from introduction of a new visual element. Mitigation would include construction of a new bike-pedestrian crossing to provide connectivity with the regional trail network, funding for development and implementation of a vegetation restoration plan, interpretation plan, viewshed protection plan, and a cultural landscape inventory, compensation for the use of Parking Lots B and C during construction, and restoration of roadways and infrastructure following construction. These mitigation measures are detailed in the Final Section 4(f) Evaluation (**FEIS Appendix A**), Section 106 PA (**Appendix B**) and DRPT-NPS Mitigation Agreement (**Appendix C**).

[23] The GWMP is both an historic and a recreational resource. The GWMP also includes the MVMH, which is the original 15.2-mile segment of the scenic parkway commemorating the birth of George Washington.

- **West Potomac Park/East Potomac Park/East and West Potomac Parks Historic District:**[24] The Selected Alternative would permanently incorporate approximately 0.5 acres of land in East Potomac Park and 1.4 acres in West Potomac Park for new retaining walls, abutments, and bridges. It would also cause permanent loss of 50 parking spaces in NPS Parking Lot C to accommodate the new railroad tracks. The Selected Alternative would also remove up to four Japanese cherry blossom plantings, which are considered to be contributing resources to the Historic District. Addition of the new bridge would also obstruct views of the existing Long Bridge, which is a contributing structure to the Historic District. This would diminish the visual integrity of the contributing structure.

  Temporary occupancy of East and West Potomac Parks would include construction access and staging areas in the existing NPS Parking Lots B and C, as well as existing grassy and open areas totaling approximately 3.4 acres of land.

  In consultation with the NPS (NAMA and Region 1 - National Capital Area), FRA and DDOT made modifications to the locations of construction access and staging areas to reduce impacts to these resources. Minimization would also include development of a construction management plan to minimize temporary construction effects from noise and vibration and visual effects, development of a vegetation protection plan to preserve existing trees and vegetation to the extent possible, and implementation of a design review process to minimize impacts to the Historic District from introduction of a new visual element. Mitigation would include construction of a new bike-pedestrian crossing to provide connectivity with the regional trail network, and funding for development and implementation of a vegetation restoration plan, interpretation plan, viewshed protection plan, and a cultural landscape inventory. These mitigation measures are detailed in the Final Section 4(f) Evaluation (**FEIS Appendix A**), Section 106 PA (**Appendix B**) and DRPT-NPS Mitigation Agreement (**Appendix C**).

FRA finds that there is no feasible and prudent alternative to the use of Section 4(f) properties for the Project and the Selected Alternative includes all possible planning to minimize harm to the Section 4(f) properties resulting from such use. FRA and DRPT have committed to carrying out the terms of the Section 106 PA (**Appendix B**) and DRPT is committing to the DRPT-NPS Mitigation Agreement (**Appendix C**). The measures to minimize harm to Section 4(f) resources are included in the list of mitigation measures in **Table 2-2.**

2.7.3. Air Quality Conformity

The CAA of 1970, as amended and the Conformity Rule are the primary Federal legislations regulating air quality. These regulations play a role in setting the nation's air quality standards for pollutants and adopting emission control programs.[25,26] As part of the environmental review process, FRA conducted an analysis of potential emissions from the Project pursuant to 40 CFR part 93. FRA has determined that

[24] East Potomac Park is a recreational resource located on a manmade island in the Potomac River. West Potomac Park is a recreational resource encompassing the western end of the National Mall, the Tidal Basin, and the Jefferson Memorial. East and West Potomac Parks Historic District is an historic resource encompassing 730 acres of parkland including East Potomac Park and West Potomac Park.
[25] 42 USC 7401
[26] 40 CFR parts 51 and 93

Project-generated predicted annual pollutant emissions are below General Conformity *de minimis* thresholds and that no General Conformity determination is required.

2.7.4. Coastal Zone Management

The Coastal Zone Management Act of 1972 (CZMA) protects coastal areas and the surrounding habitat by defining inland coastal areas and the protection of these buffer zones within CZMA. Virginia participates in the National Coastal Zone Management Program (CZMP) and has a state coastal zone management plan that includes Arlington County. The District does not have a coastal zone management plan. Any Federal activities within the coastal zone must be consistent with the criteria set forth in the approved state plan or program. To comply with CZMA, the Federal agency must identify activities that would affect the coastal zone, including development projects, and review them for consistency with the state-specific coastal zone management plan.

The Selected Alternative would be consistent with the enforceable policies of Virginia's CZMP, as described in the Federal Consistency Determination, with which the VDEQ concurred on September 30, 2019 (see **Appendix I, Additional Agency Correspondence**). The Federal Consistency Determination commits the Project Sponsor to a variety of actions related to consistency with Virginia's CZMP, including obtaining permits and approvals related to stormwater management, RPAs, coastal lands, water resources, and other environmental resources.

2.7.5. Section 7 of the Endangered Species Act

Section 7 of the Endangered Species Act (ESA) and its implementing regulations (50 CFR part 402) requires Federal agencies to consult with the U.S. Fish and Wildlife Services (USFWS) to ensure that actions are not likely to jeopardize the continued existence of threatened or endangered fish, wildlife, or plant species or result in the destruction or adverse modification of designated critical habitat for any such species.[27] On December 4, 2017, FRA and DDOT sent formal project review requests to the USFWS, National Marine Fisheries Service (NMFS), Virginia Department of Conservation Resources (VDCR), and District Department of Energy and Environment (DOEE) to obtain information on the potential occurrence of any RTE species and ecologically sensitive communities near the Local Study Area. In a January 2, 2018, project review email, the NOAA Fisheries Protected Resources Division indicated that the Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) and shortnose sturgeon (*Acipenser brevirostum*) are present in the Potomac River. Confirmation from DOEE regarding the presence of RTE species in the District identified that three Federally listed species are known to occur in or may occur in the District of Columbia: shortnose sturgeon, northern long-eared bat (*Myotis septentrionalis*), and Hay's spring amphipod (*Stygobromus hayi*). However, DOEE stated that according to current observations, surveys, and data derived from the District's Wildlife Action Plan, no listed species were found within the Local Study Area. Based on an initial screening using the USFWS IPaC system, no other state or Federally listed species or critical habitats have been documented or are likely to occur within the RTE Local Study Area.

On September 3, 2019 FRA submitted a letter to the National Marine Fisheries Service (NMFS) initiating consultation and requesting concurrence with the determination that the construction of the Selected Alternative may affect, but is not likely to adversely affect shortnose and Atlantic sturgeon and Atlantic sturgeon Critical Habitat. The letter committed to investigating additional impact minimization

[27] 50 CFR 402

techniques as the Project moves into more detailed design phases, further reducing potential effects on shortnose and Atlantic sturgeon and Atlantic sturgeon Critical Habitat within the Action Area. NMFS concurred with this determination on October 24, 2019 (see **Appendix I, Additional Agency Correspondence**).

Re-initiation of consultation is required and shall be requested by the Federal agency or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and: (a) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered in the consultation; (b) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this consultation or; (c) If a new species is listed or critical habitat designated that may be affected by the identified action.

2.7.6. Wetlands Finding

FRA is required to make findings pursuant to Executive Order 11990, Protection of Wetlands (EO 11990), and the U.S. Department of Transportation Wetlands Order, DOT Order 5660.1A. In addition, NPS Director's Order 77-1 (DO 77-1) establishes the policies, requirements, and standards through which NPS meets its responsibilities to protect and preserve wetlands in compliance with EO 11990. NPS has jurisdiction over the Potomac River in the area impacted by the Selected Alternative. In compliance with DO 77-1, NPS has prepared a Statement of Findings for Wetlands (see **Appendix H**).

The Selected Alternative would have no impacts to wetlands regulated under Section 404 of the Clean Water Act, as described in **Chapter 6.0, Water Resources and Water Quality** in the DEIS. However, it would cause permanent impacts to approximately 0.5 acre and temporary impacts to approximately 1.1 acres of the Potomac River and Washington Channel.[28] Of these impacts, approximately 0.26 acre of permanent impact and approximately 0.83 acre of temporary impact would occur in areas of the Potomac River with a water depth below 2.5 meters, meaning that these waters are classified as riverine wetlands and are therefore addressed in the NPS Statement of Findings.

FRA and DDOT have made efforts throughout the planning and conceptual design process, and DRPT would continue to do so during future phases of final design, to further avoid and minimize impacts to wetlands to the extent practicable. Permits would be obtained from NPS, U.S. Army Corps of Engineers (USACE), USCG, DOEE, and VDEQ prior to construction activities. Commitments for mitigation for unavoidable impacts are described in **Table 2-2**. Additional mitigation would be developed in coordination with regulatory agencies during the permitting process and incorporated into final design for both temporary and permanent impacts. If permanent impacts to wetlands and other waters of the U.S. from construction activities require compensatory mitigation, the final compensatory mitigation plan would be determined during the permitting process, in coordination with the regulatory agencies, including incorporation of previously agreed upon compensatory mitigation arising from the NPS Statement of Findings or other applicable agreements.

[28] While not wetlands, these water bodies are considered Waters of the United States and are therefore subject to Section 404 requirements. As stated in **Section 2.5, Monitoring and Enforcement**, it is anticipated that impacts would be subject to a Nationwide Permit #15.

Based upon these efforts and future mitigations, FRA and NPS determine that the Project is consistent with the requirements of EO 11990 and FRA determines that the Project is also consistent with the requirements of DOT Order 5660.1A.

2.7.7. Floodplains Finding

U.S. DOT Order 5650.2 implements EO 11988, Floodplain Management. This order states that FRA may not approve an alternative involving a significant encroachment of the floodplain unless FRA can make a finding that the proposed encroachment is the only practicable alternative. In addition, NPS Director's Order 77-2 (DO 77-2) applies to all NPS proposed actions, including the direct and indirect support of floodplain development, that could adversely affect the natural resources and functions of floodplains or increase flood risks. However, while the Selected Alternative is located in the 100-year and 500-year floodplain, it does not fall into any of the action classes which require a Statement of Findings for Floodplains and therefore one was not prepared.

The Selected Alternative would require 22 new piers within the Potomac River as well as earthwork, abutments, and piers within the upland in and adjacent to the floodplain. Construction of the bridge embankments and piers would result in an impact of approximately 12,000 cubic yards within the Federal Emergency Management Agency (FEMA)-designated 100-year floodplain. However, FRA has determined that none of the floodplain encroachments represent a significant encroachment because:

- The Selected Alternative would not result in a considerable probability for loss of human life because it would pose no significant potential for interruption or termination of a transportation facility that is needed for emergency vehicles or provides a community's only evacuation route;
- The likely future damage associated with the encroachment would not be substantial in cost or extent, including interruption of service on or loss of a vital transportation facility, because the railroad tracks in the Selected Alternative would be located on bridges and embankments above the 100-year and 500-year flood levels;
- The Selected Alternative would not pose a significant flooding risk, nor would it increase flood height elevations or the probability of flooding, or the potential for property loss and hazard to life; and
- The Selected Alternative would not have significant adverse effects on natural and beneficial floodplain values.

Minimization efforts would include pier support design having an elliptical shape that would allow smoother flood flow conveyance underneath the bridge with minimal turbulence and hydraulic force against the pier walls. Avoidance and minimization measures during construction would include establishing staging yards landward of the 100-year floodplain as much as possible. While several construction staging sites must be placed in the floodplain, the contractor would be required to adhere to a plan of action in the event of an oncoming flood event. Mitigation of temporary effects would, at a minimum, involve restoration of temporarily disturbed areas and construction zones and measures within the floodplain to return them to the pre-existing condition. Refinement of measures to avoid or minimize work in the floodplain would take place in the design phase. Application of these measures by DRPT during the construction phase would reduce the potential for any net rise in the base flood or impacts to the floodplain from construction activities.

The Project would be designed and constructed in accordance with Executive Orders 11988-Floodplain Management; the Virginia Erosion and Sediment Control Regulations; and the Virginia Stormwater Management Law and regulations. The Project would include an erosion and sediment control plan and a stormwater management plan approved by the Virginia DEQ, or local water quality protection criteria at least as stringent as the above state requirements. The Project would also undergo a floodplain review with DCRA, DOEE, and Homeland Security and Emergency Management Agency (HSEMA) for a permit in accordance with the Floodplain Review Flowchart. DRPT would implement these floodplain avoidance and minimization efforts, including compliance with Executive Order 11988, erosion and sediment control, and stormwater management requirements, on an incremental basis as specific subprojects are funded and advanced through final design and construction. Based upon these findings, FRA and NPS determine that the Project is consistent with the requirements of Executive Order 11988.

2.7.8. Environmental Justice

EO 12898 of February 11, 1994: *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, directs Federal agencies to take appropriate and necessary steps to identify and address disproportionately high and adverse environmental effects of Federal agency actions (including transportation projects) on minority and low-income populations. FRA and DDOT conducted data collection and analysis to determine the presence of and effects of the Long Bridge Project on any Environmental Justice populations in accordance with EO 12898, Title VI of the Civil Rights Act of 1964, and U.S. DOT Order 5610.2(a). Because FTA is a Cooperating Agency, the analysis for the Project is also consistent with FTA Circular 4703.1, which provides guidance for incorporating Environmental Justice principles into plans, projects, and activities subject to adoption of or approval by FTA.

As a result of the analysis as detailed below, FRA and NPS have determined that the Selected Alternative does not have disproportionate adverse effects on Environmental Justice populations. Based upon these findings, FRA determines that the Project is consistent with the requirements of Executive Order 12898.

2.7.8.1. Assessment of Disproportionately High and Adverse Effects

The Selected Alternative would not cause disproportionately high adverse effects on Environmental Justice populations. The Environmental Justice analysis considered the geographical distribution of the potentially adverse impacts and whether they would occur in areas with a high proportion of minority or low-income persons; fall mostly on facilities or activities of cultural or economic importance to such populations; or otherwise affect minority or low-income persons more than the general population. This approach addressed direct and indirect impacts from the operation of Long Bridge after the completion of the Project and impacts from the construction of the Project.

With regards to Environmental Justice, the Preferred Alternative would not:

- Result in disproportionately high permanent adverse impacts on low-income or minority populations;
- Deny low-income or minority populations benefits from the Project;
- Disproportionately impose environmental impacts on minority or low-income persons;
- Disproportionately affect facilities or services of importance to minority or low-income persons; and

- Would not displace any minority or low-income persons.

Permanent cultural resources impacts and temporary transportation, air quality, noise, and cultural resources impacts would overlap with Environmental Justice populations. As detailed in the DEIS in **Chapter 20, Environmental Justice (Lines 261-308)**, all users regardless of race, ethnicity, or socioeconomic status would experience these impacts. Therefore, the Selected Alternative would not cause disproportionately high adverse effects on Environmental Justice populations.

In addition, the Selected Alternative would permanently affect approximately 0.5 acres of East Potomac Park and 1.4 acres of West Potomac Park. Within West Potomac Park, construction would cause temporary impacts to NPS Parking Lots B and C. Within East Potomac Park, construction would cause temporary impacts to the ballfield along Ohio Drive SW near the NAMA Headquarters for construction staging. The surface parking areas are heavily used during events such as the National Cherry Blossom Festival, but lightly used most of the rest of the year. Local District residents including Environmental Justice populations who live nearby use East Potomac Park for activities such as cycling along Ohio Drive, walking on trails, and picnicking along the waterfront. However, the effects would not alter the recreational opportunities available to local residents because the majority of these activities take place south of Buckeye Drive, away from the location of impacts to the park.

2.7.8.2. Coordination with Environmental Justice Communities

As described in the DEIS in **Chapter 20.7, (Lines 328-402) Coordination with Environmental Justice Communities**, FRA and DDOT have provided opportunities for meaningful public involvement prior to and throughout the NEPA process through the Project website, contact list, public information meetings, and public comment periods. FRA and DDOT implemented an Agency and Public Coordination Plan in accordance with the requirements of 23 USC 139.

FRA and DDOT have held five public meetings during the NEPA process, including the Scoping meeting and the public hearing on the DEIS. The Project website, newspaper advertisements (*Washington Post Express, El Tiempo Latino*), press releases, email blasts, local distribution of meeting flyers (nearby public facilities, community groups), and social media (FRA and DDOT Facebook and Twitter) have been used to publicize all public meetings. Advertisements have been published in Spanish, translation services have been available to public meeting attendees, and American Sign Language interpreters have been available at meetings. Meeting announcements have included information on how to request special accommodations and language assistance services (translation or interpretation).

DDOT is committed to providing all citizens, regardless of race, color, age, gender, or national origin, the opportunity to participate in and respond to transportation plans, programs, and activities that may affect their community. To help ensure DDOT reaches this goal and maintains compliance with Title VI of the Civil Rights Act of 1964 and all relevant Federal and local nondiscrimination laws, DDOT asked participants at each meeting to voluntarily complete a Title VI public involvement questionnaire. DDOT initiated public outreach for the Project in 2012, prior to the initiation of the NEPA process, with the Phase I Study and development of the Project website (www.longbridgeproject.com). The Phase I Study included three public meetings conducted in an open-house format between November 2012 and December 2013. DDOT announced meetings through advertisements in the *Washington Post*, postcards distributed at Metro stations during morning commute hours, and email distributed to the Project mailing list. Following the initiation of the Phase II Study, FRA and DDOT held a public meeting on

February 10, 2016, to update the public on the Project status and schedule. DDOT and FRA announced this meeting through an advertisement in the *Washington Post Express*, website notification, and email distribution to the Project mailing list.

2.7.9. Realty Transaction

The GWMP, West Potomac Park, and East Potomac Park are owned by the U.S. Government and administered by the NPS under the provisions of the NPS Organic Act of 1916.[29] The law gives the NPS the management authority to protect the resources and values of the parks it operates. NPS participated in the NEPA process as a Cooperating Agency due to the potential for Project impacts to Federal park property and other Federal lands including the GWMP, National Mall and Memorial Parks, Captain John Smith Chesapeake National Historic Trail, the Star-Spangled Banner National Historic Trail, Potomac Heritage National Scenic Trail, the Washington-Rochambeau Revolutionary Route National Historic Trail, and the Potomac River bottom. The NPS has worked collaboratively with FRA, DDOT, and DRPT throughout the environmental review process.

DRPT is coordinating with the NPS to identify the appropriate mechanism by which it could transfer, exchange or dispose of lands or interests therein, including in GWMP (approximately 1.1 acre), East Potomac Park (approximately 0.5 acre), and West Potomac Park (approximately 1.7 acre). While potential mechanisms could include an exchange of land in accordance with 54 USC 102901(b), congressional authorization is likely necessary to facilitate the transfer of sufficient interests in NPS lands to DRPT for the Long Bridge Project. If a land exchange is pursued, DRPT and NPS would identify appropriate properties for the exchange during final design.

NCPC has approval authority over Federal projects within the District, including all land transfers and physical alterations to Federal property such as the NPS park property identified above. NCPC also has advisory review authority over District of Columbia property, or Federal property outside the District of Columbia, including Arlington County, that may be affected by the Project, pursuant to the National Capital Planning Act of 1952.[30] To facilitate NCPC review, **Table 2-4** provides a summary of the impacts to the property to be exchanged or transferred. NCPC plans to issue a separate ROD for their action related to the Project.

[29] 54 USC 100101
[30] 40 USC 8701

Table 2-4 | Impacts to Land Exchange/Transfer Parcels (inclusive of Bike-Pedestrian Crossing)

	GWMP	East and West Potomac Parks	Commitment/ Mitigation ID (see Table 2-2)
Amount of Property to be Transferred/ Exchanged	Approx. 0.9 or 1.1 acres	Approx. 2.2 acres (East Potomac Park: approx. 0.5 acre West Potomac Park: approx. 1.7 acres)	A12; A13; A15; B60; B63
Impervious Area Change	Approx. 6,500 SF	Approx. 2,000 SF	B23
Trees Affected	Approx. 70	Approx. 170	B01; B02; B03; B07; B08; B58; B69; C03; C04; C05; C06
Larger Trees (greater than 34-in trunk diameter) Affected	3	8	B02; B07; B08; B69; C03; C04; C05; C06; C10; C11
Cherry Blossom Plantings Affected	n/a	4	B02; B07; B08; B69; C03; C04; C05; C06; C10; C11
Visual Impacts	• Minor to moderate adverse impacts to views along the GWMP due to additional bridge crossing the roadway and removal of vegetation and trees included as part of the original parkway design.	• Generally negligible adverse impacts to views from East Potomac Park, due to distance of views and the number of bridges within the existing viewshed. • Major adverse impacts to views in West Potomac Park immediately adjacent to the existing railroad bridge along Ohio Drive SW. • Removal of mature trees and the construction of a retaining wall to support the new tracks, replacing the existing vegetated embankment, would make the railroad infrastructure more prominent.	A17; A18; B07; B69; B70; B71; D04

2.8. Conclusion

FRA has carefully considered the Project record including, the DEIS, FEIS, and associated technical reports and analysis; the Section 4(f) Determination; the mitigation measures required including commitments made in the Section 106 PA and the DRPT-NPS Mitigation Agreement; and the written and oral comments offered by agencies, stakeholders, and the public on this record. Based on this consideration, FRA has determined that the Selected Alternative is the best option for the Long Bridge Project and that its approval of the Selected Alternative is in the best interest of the public. FRA has further determined that all practicable measures to minimize environmental harm have been incorporated into Selected Alternative and that appropriate commitments are outlined in this FEIS/ROD to be implemented by the Project Sponsor, now DRPT, in final design, construction contracts, and post-construction monitoring. After consultation with FRA, DDOT, and DRPT, review of the FEIS and other NEPA documentation, NPS, in accordance with 43 CFR 46.120, concurs with FRA's decision.